DOCUMENT RESUME

ED 100 676 SE 018 446

TITLE Environmental Education Curriculum Development, Grades K-1, For St. Martin Parish.
INSTITUTION Saint Martin Parish School Board, St. Martinville, La.
PUB DATE [74]
NOTE 241p.

EDRS PRICE MF-$0.75 HC-$11.40 PLUS POSTAGE
DESCRIPTORS Conservation Education; *Curriculum Guides; Ecology; *Elementary Education; Environment; *Environmental Education; Grade 1; Instructional Materials; *Kindergarten; Natural Resources; Primary Education; *Science Education
IDENTIFIERS Air; Soil

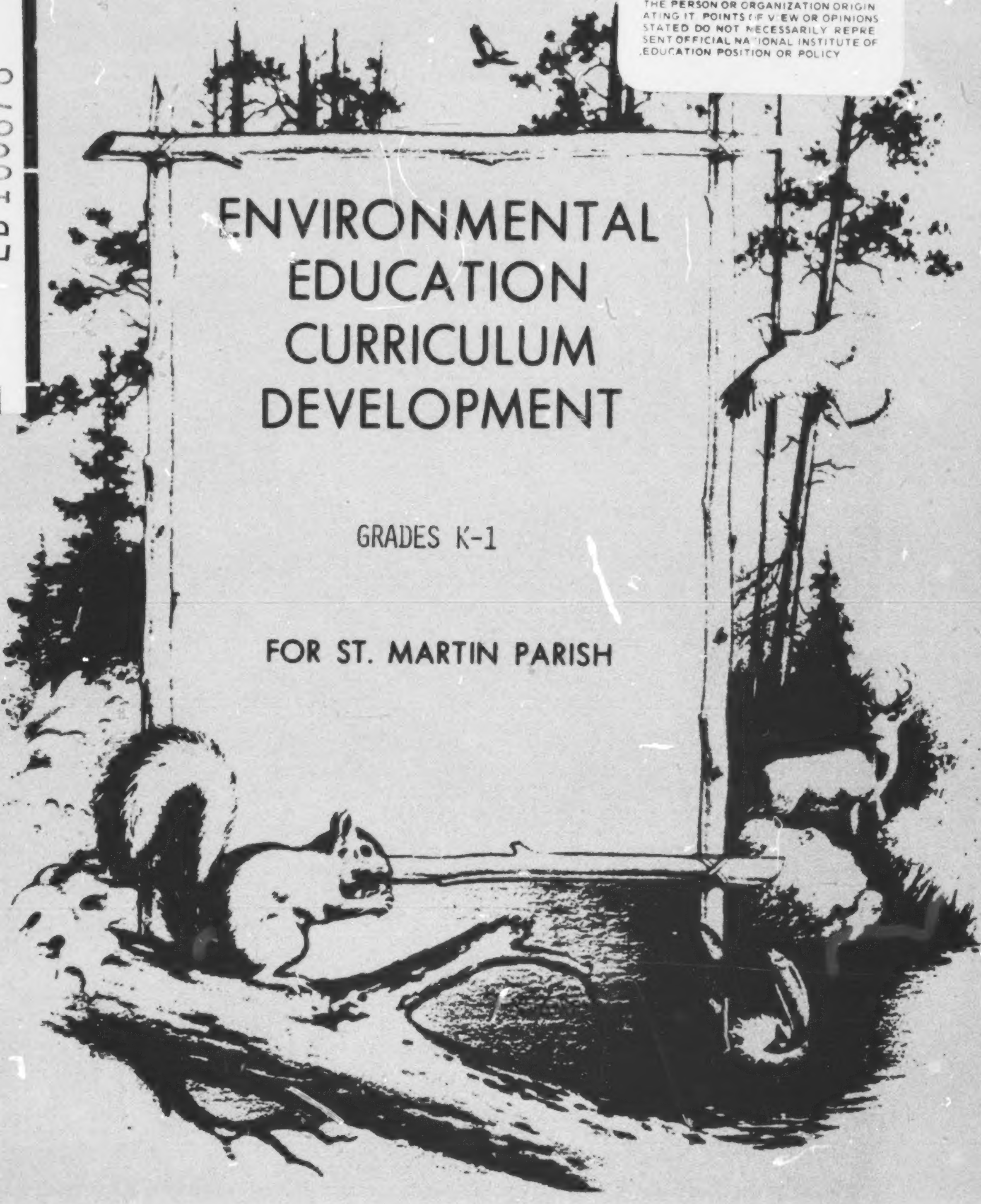
ABSTRACT

This environmental education curriculum guide is designed for teacher use in kindergarten and first grade. It contains six units, which aim to develop environmental concepts related to the bio-physical environment. Each unit, which is based on several concepts, includes behavioral objectives, activities, student worksheets, diagrams, illustrations, discussion questions, vocabulary words, resource materials, and teacher evaluation forms. The techniques of discussion, observation, classification discovery, inquiry, and field work are employed throughout. Unit 1, Ecology, deals with the interdependence between living and non-living things in the environment. The study of soil, what it is, its importance, and conservation is the focus of Unit 2. Unit 3 examines air as a substance which has weight and occupies space but has no color, odor, or shape. Unit 4 looks at water and the vital role it plays in the environment. Noise, Unit 5, is a study of sounds, how they originate, their variety, and their effects on man. Unit 6, Wildlife, looks at both plants and animals. Bird flash cards and animal flash cards, plus instructions for their use, are also included in this unit. (TK)

ED 100676

BEST COPY AVAILABLE

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY



ENVIRONMENTAL EDUCATION CURRICULUM DEVELOPMENT

GRADES K-1

FOR ST. MARTIN PARISH

ST. MARTIN PARISH SCHOOL BOARD

SE018 446

UNIT 1 ECOLOGY

CONCEPT #1 : Living and non-living things are different. 2

Objectives 2

Activities 2

Chart (Concept 1 Activity 1) 4

Student Worksheet (Concept 1 Activity 5) 5

CONCEPT #2: Living things need other things in their environment. 6

Objectives 6

Activity 1 6

Activity 2 7

Activity 3 8

Student Worksheet (Concept 2 Activity 4) 10

CONCEPT #3: There are differences between animals and similar animals are grouped together. 16

Objectives 16

Activity 1 16

Student Worksheet (Concept 3 Activity 1) 17

Activities 2, 3 & 4 18

Student Worksheet (Concept 3 Activity 4) 19

Student Worksheet (Concept 3 Activity 6) 21

Fish Puzzle (Concept 3 Activity 7) 22

Transparency (Concept 3 Activity 8) 26

Transparency on amphibians (Concept 3 Activity 9) 27

Transparency on insects (Concept 3 Activity 10) 29

SUGGESTED QUESTIONS: 34

VOCABULARY 35

RESOURCE MATERIALS 36

UNIT 2 SOIL

CONCEPT #1: To locate pictures showing stages of soil erosion. 40

Objectives.. 40

Activities.. 40

CONCEPT #2: The importance of soil to plant growth. 41

Objectives.. 41

Activities.. 41

CONCEPT #3: Soil is made up of tiny broken particles of rock mixed with other materials. 43

Objectives...43

Activities...43

Student Worksheet (Concept 3 Activity 3)........................44

QUESTIONS..45

VOCABULARY...46

RESOURCE MATERIALS...47

UNIT 3 AIR

CONCEPT #1: Air is all around us. 51

Objectives.....51

Activity 1.....51

Activity 2.....52

CONCEPT #2: Wind is air that is moving. 53

Objectives.....53

Activities 1 & 2.....53

CONCEPT #3: Air pollution is harmful. 56

Objectives.....56

Activities 1 & 2.....56

QUESTIONS.....58

VOCABULARY.....59

RESOURCE MATERIALS.....60

UNIT 4 WATER

CONCEPT #1: All living things need water. 64

Objectives.....64

Activities.....64

Experience Chart (Concept 1 Activity 5).....65

CONCEPT #2: Water can be kept clean. 66

Objectives.....66

Activities.....66

CONCEPT #3: Water falls to the earth and goes back up into the air. 67

Objectives.....67

Activities.....67

Student Worksheet (Concept 3 Activity 3).....69

CONCEPT #4: Water dissolves many materials. 71

Objective.....71

Activities.....71

CONCEPT #5: Polluted water can damage living and non-living things. 72

Objectives.....72

Activities.....72

DISCUSSION QUESTIONS.....73

VOCABULARY.....74

RESOURCE MATERIALS.....75

UNIT 5 NOISE

CONCEPT #1: Sounds are all around us. 79

Objectives 79

Activities 79

CONCEPT #2: Sounds travel through gases, liquids and solids. 80

Objective 80

Activities 80

Student Worksheet (Concept 2 Activity 3) 81

CONCEPT #3: Sound is used mainly for communication. 82

Objectives 82

Activities 82

CONCEPT #4: We can hear many different sounds. 83

Objectives 83

Activities 83

Student Sheet (Concept 4 Activity 9) 85

DISCUSSION QUESTIONS 86

VOCABULARY 87

RESOURCE MATERIALS 88

UNIT 6 WILDLIFE

CONCEPT #1: Animals differ greatly in body covering. 92

Objectives.......................................92

Activities.......................................92

Student Worksheet (Concept 1 Activity 1)..........94

Student Worksheet (Concept 1 Activity 2)..........95

CONCEPT #2: Plants give animals food, shelter, and clothes. 96

Objectives.......................................96

Activities.......................................96

Student Worksheet (Concept 2 Activity 2)..........97

CONCEPT #3: Animals have specialized body structures that are adapted for food getting. 99

Objectives.......................................99

Activities.......................................99

Student Worksheet (Concept 3 Activity 7)..........101

CONCEPT #4: Some animals eat plants and others eat animals and still others eat plants and animals. 103

Objectives.......................................103

Activities.......................................103

Illustration for Activity #5.......................105

Student Worksheet (Concept 4 Activity 1)..........106

Student Worksheet (Concept 4 Activity 2)..........107

Studnet Worksheet (Concept 4 Activity 3)..........108

Student Worksheet (Concept 4 Activity 4)..........109

CONCEPT #5: Animals differ in size and shape. 110

Objectives.......................................110

Activities.......................................110

BEST COPY AVAILABLE

Student Worksheet (Concept 5 Activity 1)....................112

Student Worksheet (Concept 5 Activity 4)....................113

Student Worksheet (Concept 5 Activity 7)....................115

DISCUSSION QUESTIONS....................116

RESOURCE MATERIALS....................117

BIRDS FLASH CARD AND INFORMATION....................120

FISH FLASH CARDS AND INFORMATION....................142

INSECT FLASH CARDS AND INFORMATION....................164

MAMMALS FLASH CARDS AND INFORMATION....................186

REPTILE FLASH CARDS AND INFORMATION....................208

GLOSSARY....................230

UNIT 1 ECOLOGY

Ecology is the study of the interdependence among living things and non-living things in the environment. Through an ecological study we find that living things survive by depending on non-living and other living things in their environment.

Some non-living factors in the environment are air, water, soil, and sunlight. These factors provide for some of the basic needs of living things. Without these factors life would not exist.

Living things are grouped into separate categories according to the presence of certain distinguishing characteristics. Some of the more familiar animal groups are mammals, birds, fish, reptiles, amphibians, and insects. Inspite of the distinguishing characteristics between the animal (or plant) groups they are all related in some way through the ecological processes occurring in nature.

Plants and animals depend on each other in order to survive. One of the most basic needs that is fulfilled is the need for food. Various living things link together forming a definite sequence known as a food chain. Through the food chain animals are provided with their needed food supply.

Green plants, which require sunlight to produce food, serve as the basis of every food chain. Various types of animals rely primarily on green plants as a food source and, in turn, serve as a good source for other animals including man.

Because of their interrelated importance each biological link of the many food chains must somehow be preserved, otherwise extinction of living things might result in contamination of our natural resources which possess a serious threat to the continuity of the food chains. Therefore man must be made aware of this threat and its resulting consequences to all living things.

CONCEPT #1:

Living and non-living things are different.

OBJECTIVES:

1. Students will identify the characteristics of living and non-living things.
2. Students will distinguish between living and non-living things.

ACTIVITY:

1. Show the students a non-living object (book, scissors, or colors) and list its characteristics on the chalkboard as the students describe the object. Show the students a living thing (turtle, fish, insect) and list its characteristics on the chalkboard as the students describe this living thing. Ask how the book and turtle are the same? different? Through a class discussion have students identify the book (etc.) as non-living and the turtle(etc.) as living and point out the characteristics of each. Students should be made aware of the fact that all things are either living or non-living and therefore belong under one of these groups. Students will then identify themselves as living or non-living by comparing themselves to the appropriate group.

   To conclude this activity the basic characteristics of living and non-living things could be written on a chart. Next to each basic characteristic of living things, a picture of illustration could be used to provide for a better understanding of these characteristics.

   (See student chart)

ACTIVITY:

2. The teacher may obtain, or have the students collect real living and non-living objects and pictures of living and non-living things. (It is suggested that both plants and animals be used.) Through the use of the chart given in the previous activity review the differences between living and non-living things. Provided with two boxes labeled (LIVING THINGS) and (NON-LIVING) things have the students place the objects in the proper boxes and tell why they placed it in that particular box.

3. Provided with the two labeled boxes from Activity 2, the students will review the differences between living things and non-living things and suggest ways of further dividing each of these two groups. Students will be asked to divide the non-livings into two separate groups by placing each non-living thing under one of the following heading: "Were Once Alive" or "Were Never Alive". The teacher may discuss that some non-livings were made from living things; for example, wood comes from trees, paper comes from trees, wool from sheep, cloth from cotton, etc. Students will be asked into what two groups living things can be divided (plants - animals). The living things will be divided into a plant group and an animal group. Review the characteristics of living things and associate these with the living things.

4. Take the class out for a short walk to see how many living things they can find. List the names of various living things that were seen and discuss why these are living things. Point out which are plants and which are animals (include people). Have the students illustrate (draw) some of the living things they saw on the walk. As the children identify the living things which they drew and tell how they know it is a living thing, the teacher can write the child's statement on his illustration.

   NOTE: (Same type of activity may be done with non-living things, if necessary)

5. Using the attached worksheet have the students indicate which items are living by encircling the items and those which are non-living by putting an"X" through them. The students could then color the items pictured on the worksheet.

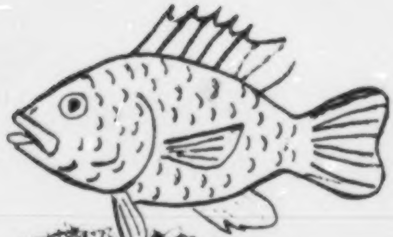
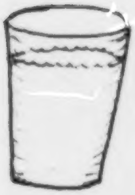
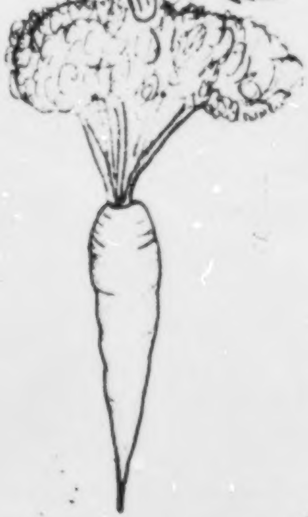
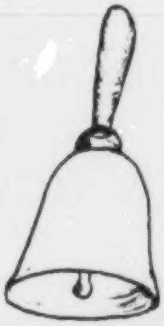
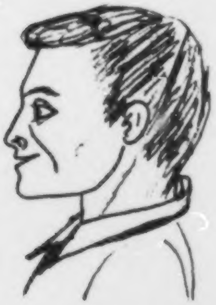
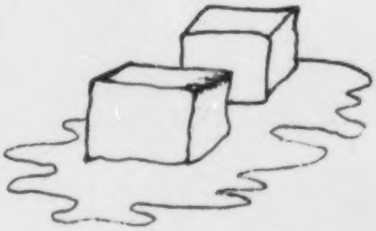
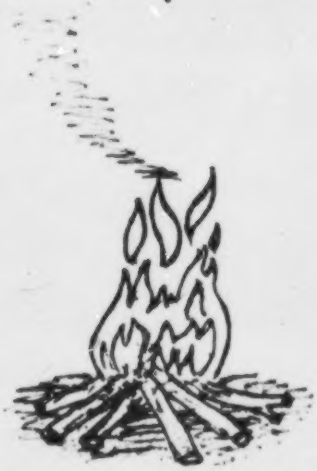
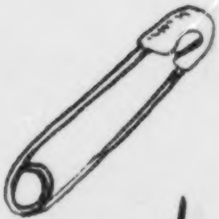
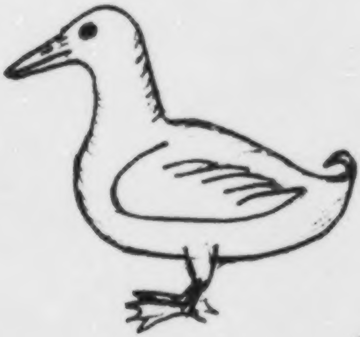
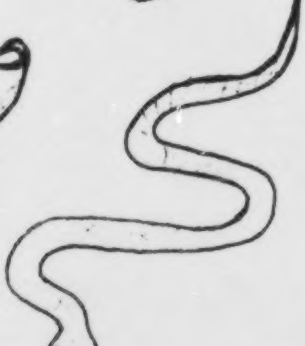
CHART

TO ACCOMPANY: CONCEPT #1 ACTIVITY #1

LIVING		NON-LIVING	
1. Needs air to breathe.	☐	1. Does not need air.	☐
2. Needs food and water.	☐	2. Does not need food or water.	☐
3. Self movement.	☐	3. Cannot move by itself.	☐
4. Grows.	☐	4. Does not grow.	☐
5. Makes more like itself.	☐	5. Does not make others like it.	☐

STUDENT WORKSHEET

TO ACCOMPANY: CONCEPT #1 ACTIVITY #5

CONCEPT #2:

Living things need other things in their environment.

OBJECTIVES:

1. The students will identify the basic needs of living things.
2. The students will determine that plants need sunlight, water, air, and soil.
3. The students will arrange a three link food chain in proper sequence.
4. The students will discuss only the importance of food chains.

ACTIVITY 1:

1. Obtain an animal such as a hamster, a fish, or a rabbit. Keep the animal in the classroom for a few days so that the students can provide for its basic needs (food, air, water, shelter). After providing for these needs, the students should be aware that the animal has certain basic needs for its survival. Discuss these basic needs through the use of the following suggested questions:

    1) Where did we keep the animal?

    2) Why did we keep it there?

    3) What do you call the place where an animal lives?

    4) What do you call the place where you live?

    5) What would happen if our animal did not have a place to live?

    6) What would happen if you did not have a place to live?

    7) Even though our animal had a home, what else did we have to give him to keep him alive?

    8) What would happen to our animal if he had no water to drink? no air to breathe? no food to eat?

    9) What do you need to keep alive?

    10) What would happen to you if you had no water to drink? no air to breathe? no food to eat?

BEST COPY AVAILABLE

ACTIVITY 1 CONTINUED:

11) Do you think all living things needs certain things to stay alive? Why?

ACTIVITY 2:

1. Divide the class into four groups. Each group will study the influence of one of the following factors on the growth of the plants:
    a. Lack of water
    b. Lack of sunlight
    c. Lack of air
    d. Lack of soil
2. Provide each group with two similar plants, (small potted plant) one to be used as a control and the other to be used as an experimental plant. Each group may name and label each of their two plants.
3. Group I will provide water, sunlight, air, and soil for the control and all factors except water for the experimental plant.
4. Group II will provide water, sunlight, air, and soil for the control and will provide all factors except sunlight for the experimental plant. The sunlight can be omitted by covering the plant with a can containing holes to allow for the passage of air.
5. Group III will provide water, sunlight, air, and soil for the control and all factors except air for the experimental plant. The air can be omitted by placing a jar over the plant, being certain that no air can enter through the mouth of the jar, or by putting the plant inside of the jar and cover it tightly. (be sure to include the soil)
6. Group IV will provide water, sunlight, and soil for the control and all factors except soil for the experimental plant. Gently remove the soil that surrounds the roots of the experimental plant. After a few days compare the control and experimental plants.
7. After the results have been observed each group should illustrate their findings by drawing a picture of the control plant and the experimental plant. One member of each group can present their drawing and an explanation of their procedure and results to the entire class. Review the basic needs of the plants as indicated by the results of the experiments.

ACTIVITY 3:

1. The teacher will display a picture of grass. Ask the students the following questions:
    a. What is this? (grass)
    b. Where do you find grass?
    c. Is grass a living thing?
    How do you know?
    d. Is it a plant or an animal?
    How do you know?
    e. How do animals use grass?
    f. What animals eat grass?

2. Display the picture of a cow next to the picture of the grass and ask the following questions:
    1. Is a cow a plant or an animal?
    How do you know?
    2. What does the cow eat?
    3. What do people get from a cow?
    4. Besides milk what other food do people get from a cow?

Now display a picture of a child eating meat and drinking milk. Ask the following questions:

1. What is the child doing?
2. What is he drinking?
3. Where did the milk come from?
4. What is the child eating?
5. Where did the meat come from?
6. Do living things help each other? How?
7. Do you need other living things? Why?
8. Did the cow need a living thing? Why?
9. Can you see now how all living things need other living things?

ACTIVITY 3 CONTINUED:

The teacher can then remove the three pictures and then ask a few children to arrange them in the proper order (first, second, third).

NOTE: Various arrangements and rearrangements could be used to further the understanding of the correct sequence of the pictures.

For example, the pictures could be placed in an incorrect order and students be asked to correct the order of the pictures.

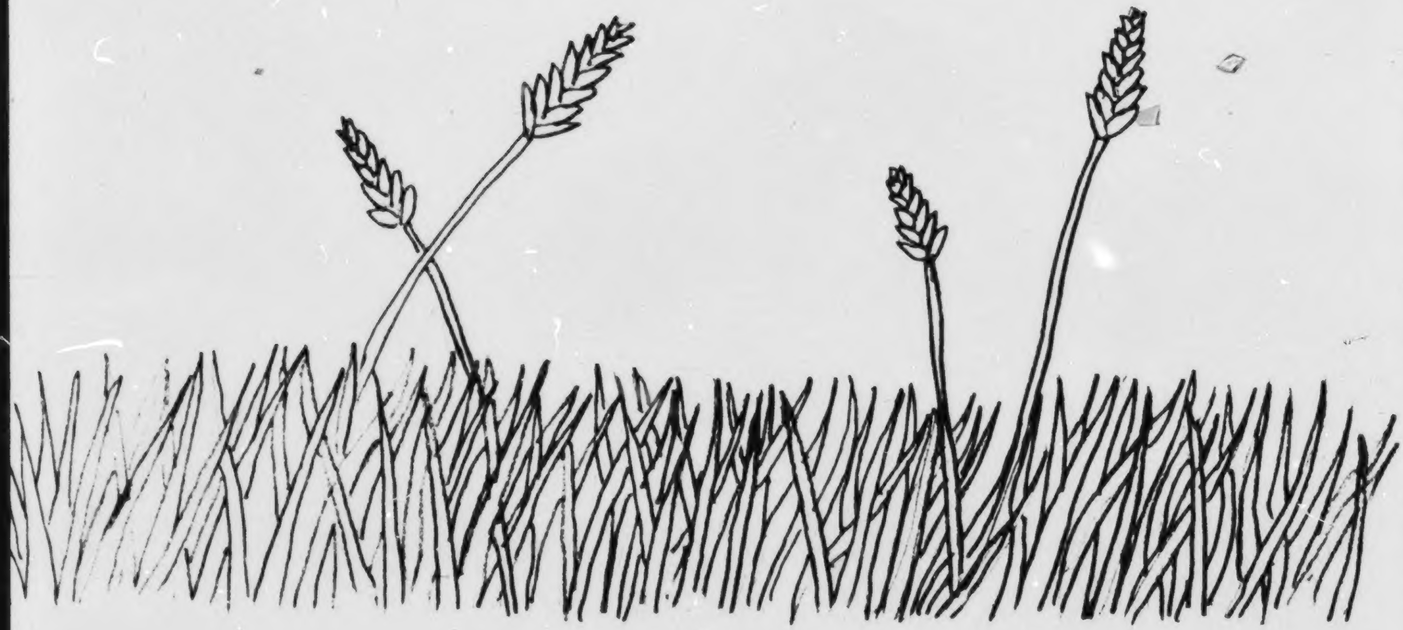
Through a discussion, the students should become aware that the proper order of the pictures represents a definite feeding pattern (food chain). (Grass goes first because grass can only be eaten by cows. Cow goes second because the cow eats the grass and supplies food for man. Man goes third because man receive food from the cow.)
(See three display pictures)

ACTIVITY 4:

Review activity 3 from the previous day. When the students seem to understnad the proper sequence of the pictures, provide them with a worksheet showing the three pictures (grass, cow, child). Have them cut out these 3 pictures. Provide another sheet which has been numbered so that the students may place each picture in its proper place. (See suggested worksheets)

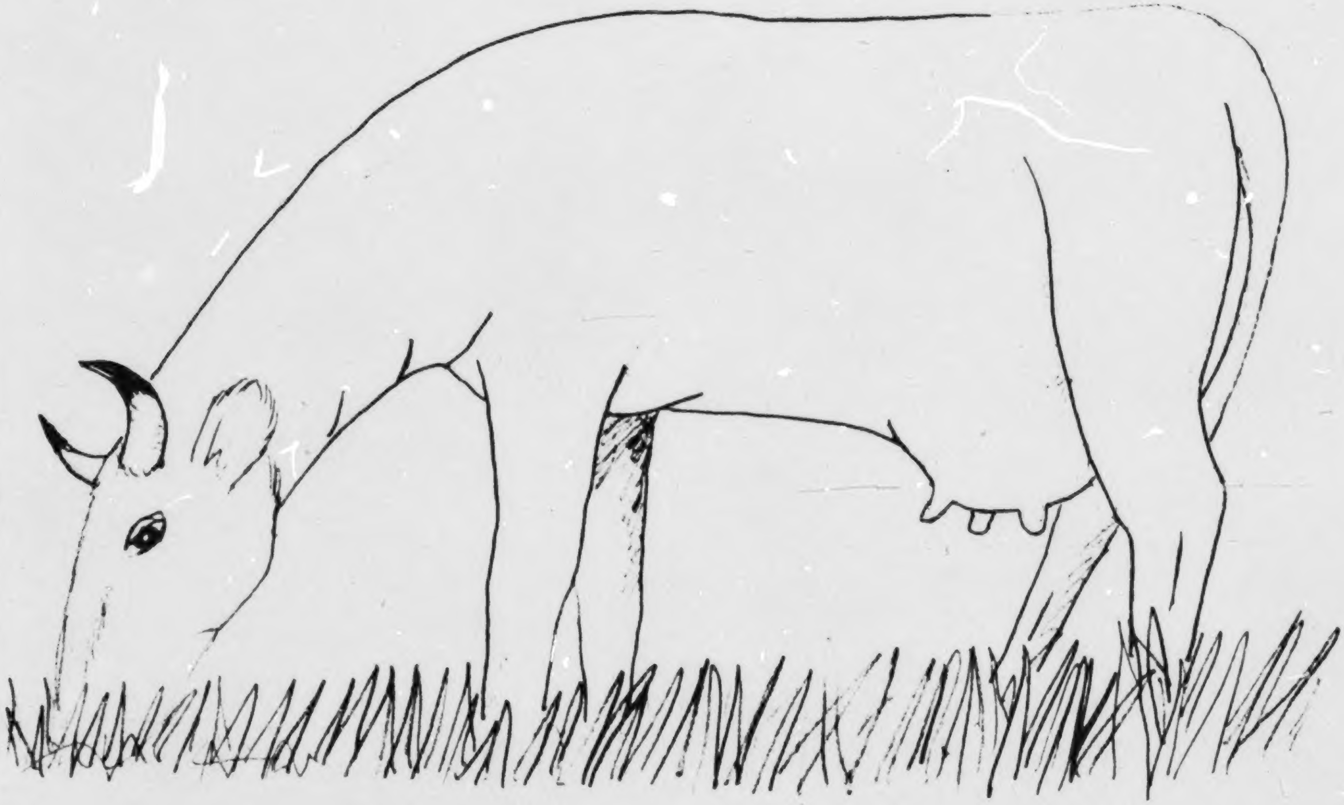
STUDENT WORKSHEET

TO ACCOMPANY: CONCEPT #2 ACTIVITY #4



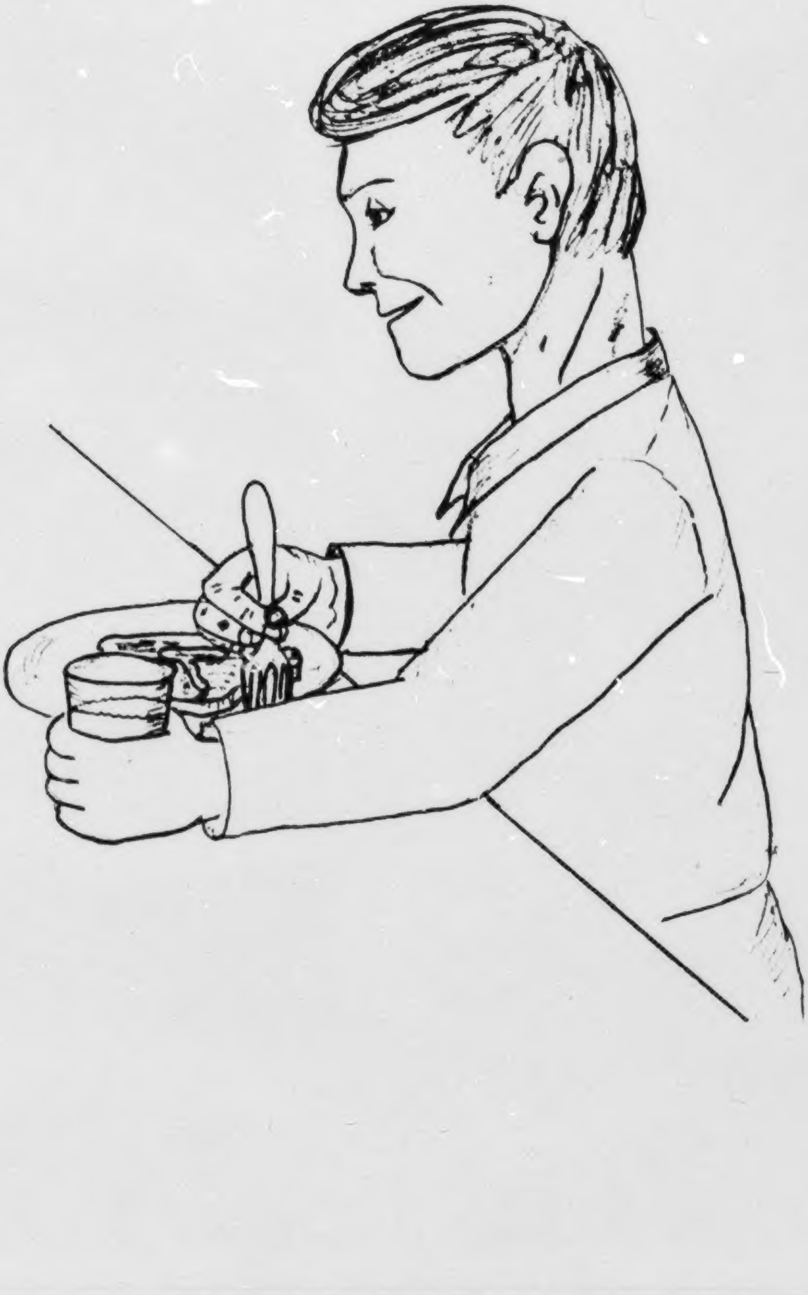
STUDENT WORKSHEET

TO ACCOMPANY: CONCEPT #2 ACTIVITY #4



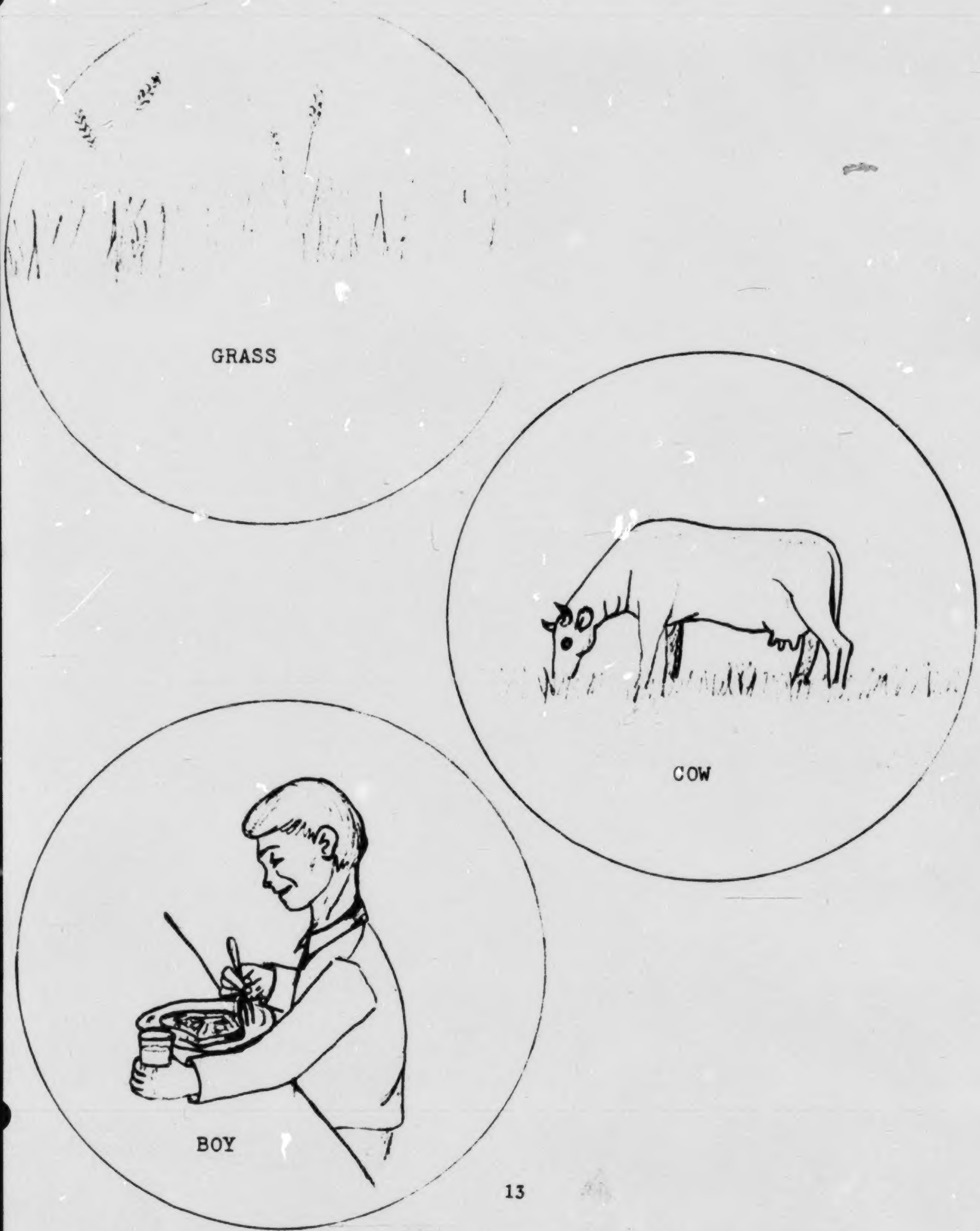
STUDENT WORKSHEET

TO ACCOMPANY: CONCEPT #2 ACTIVITY #4



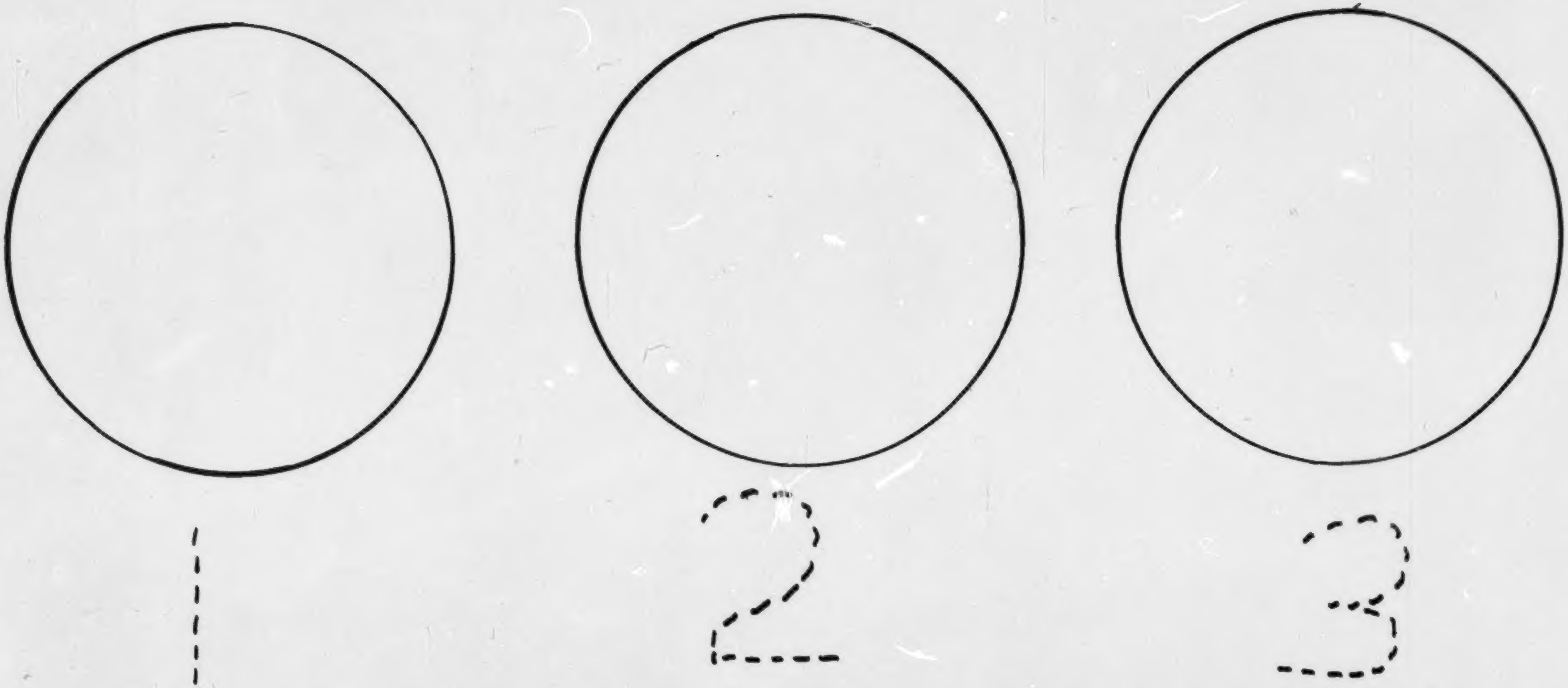
STUDENT WORKSHEET

TO ACCOMPANY: CONCEPT #2 ACTIVITY #4


GRASS
COW
BOY

STUDENT WORKSHEET

TO ACCOMPANY: CONCEPT #2 ACTIVITY #4



CONCEPT 2:

ACTIVITY 3:

1. Using display pictures from Activity 3, review the proper sequence of the three pictures. Remove anyone of the three pictures from the sequence and discuss what would happen. For example if you remove the cow, "What would happen to the grass? Boy?" The same can be done by removing one of the other two pictures.

2. Have the students name other three link food chains. Some possibilities are:

   worm - fish - people

   corn - chicken - people

   corn - pig - people

   grass - rabbit - people

   leaves - worm - bird

3. Students may be allowed to choose one of the food chains discussed and draw the three links of the food chain. Provide worksheet 2.

CONCEPT 3:

There are differences between animals, and similar animals are grouped together.

OBJECTIVES:

1. The students will:
    a. recognize that animals are different in many ways.

    b. recognize that animals are alike in some ways and are grouped according to their characteristics.

    c. be able to identify at least one animal in each of these groups: mammals, birds, fish, reptiles, amphibians, insects.

    d. be able to tell the main characteristic of each of the animal groups studied.

ACTIVITY 1:

1. Through the use of a transparency showing various types of animals, the students will identify them and discuss that they are living things but do not look alike. The following are suggested questions:

    1. Do you see any animal that you know? (Have the student point to the animal and name it. The teacher should write the name of each animal as it was identified.)

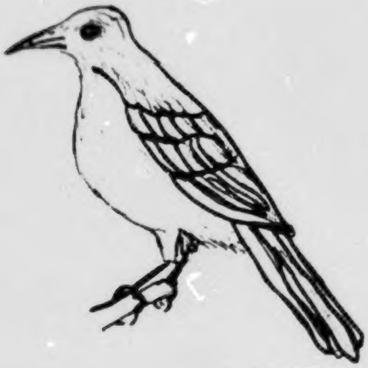
    2. How are these animals alike? (living things.)

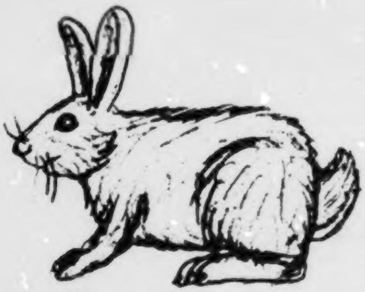
    3. How are these animals different? (do not look alike)

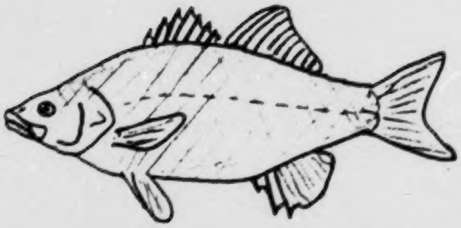
2. The teacher may have the students recognize that people, like animals, do not look alike.

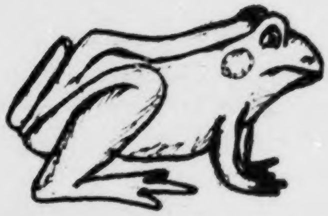
STUDENT WORKSHEET

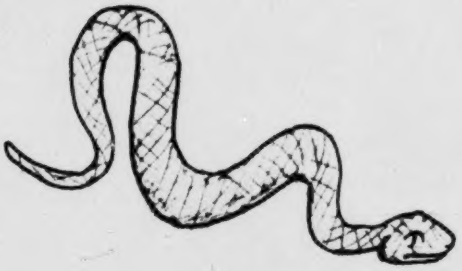
TO ACCOMPANY: CONCEPT #3 ACTIVITY #1

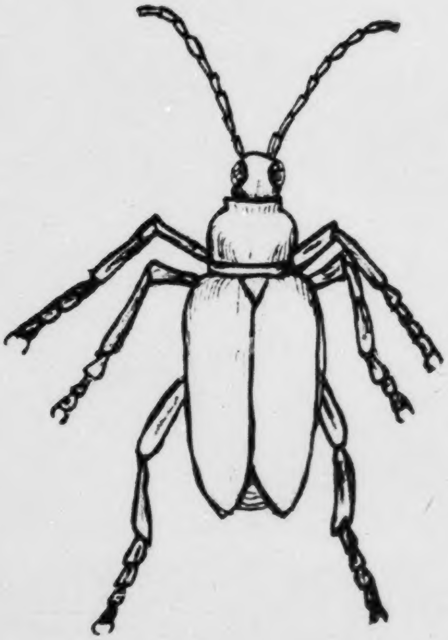












BEST COPY AVAILABLE

Provide the students with a matching worksheet. Excelled students could be asked to write the correct name under each animal's picture. The students can then color the picture. (See worksheet)

ACTIVITY 2:

1. To recognize that animals are different the students can do some of the following activities:

   a. Bring caged pets to school and discuss how they are alike and different.

   b. Collect and show pictures of different kinds of animals and discuss their differences.

   c. Draw a picture of their pet. (if a child does not have a pet, the drawing could be of an animal that they would like to have as a pet.)

   The students could tell about their picture and discuss how these animals are alike and different.

ACTIVITY 3:

1. If possible, take the class to visit a farm to observe the different farm animals. After returning, discuss and name the farm animals seen on the farm. The students could draw and tell about a farm animal bringing out the concept that farm animals look different. (If a farm cannot be visited, take the students for a walk around the school grounds noticing the animals in their natural environment. Follow-up with similar activities that would be used after the farm visit.)

ACTIVITY 4:

1. Using a picture showing various familiar mammals the teacher will identify the animals as mammals. The students will then be asked to tell how these animals are alike and how they are different.

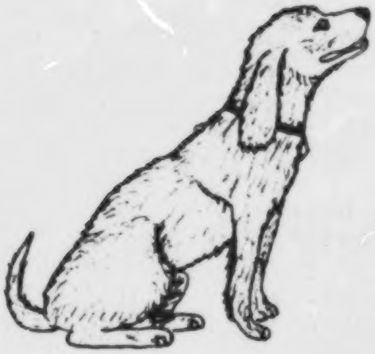
   Suggested questions:

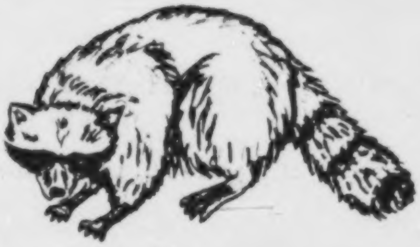
   1. Do you know the name of any of these animals? (Have a a student point to the mammal as he names it.)

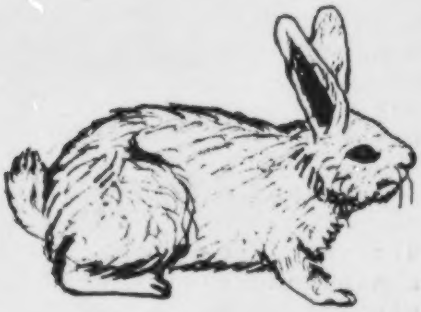
   2. Where have you seen this animal?

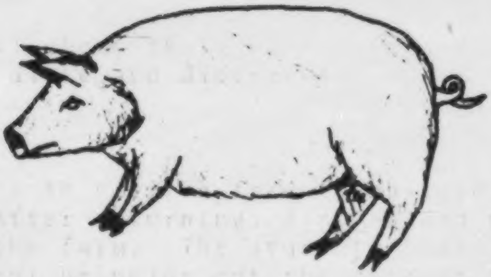
   3. Do all these animals look alike or do they look different? (Tell the students that all of these animals are grouped together and are called mammals.)

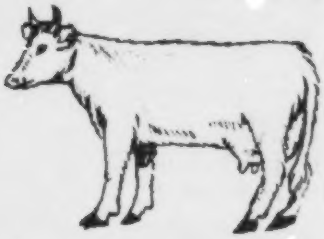
Concept #3
Activity #4

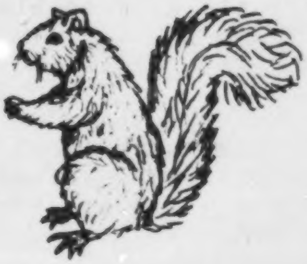


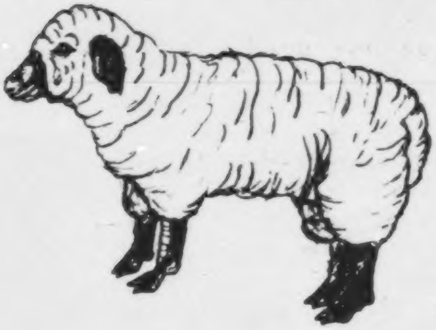


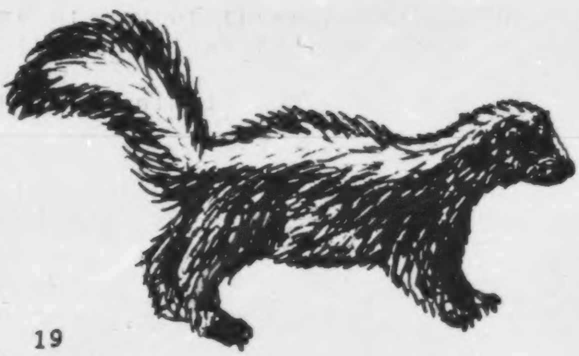












BEST COPY AVAILABLE

4. Can you name one thing that all of these animals have alike? (hair or fur)

5. In what other ways are the animals alike?

6. Why do you think all of these animals belong to the group of mammals?

7. Do you think that you belong to the mammal group? Why?

8. When you see an animal how will you know if its a mammal?

Display the picture of the mammals in the classroom so that the other groups may be compared to the mammal group.

ACTIVITY 5:

1. Tell the students that animals with feathers belong to the bird group. Have the students name some animals that they think belong to this group (duck, chicken, goose, bluejay, robin) and possibly list these on the chalkboard.

2. Using a picture or a transparency show the students some examples of the bird family and have the students identify these. Suggested questions:

    1. Do you know the name of any of these animals? (Have a student point out these animals as they are named.)

    2. Where have you seen these animals? Where does each one live?

    3. Do all these animals look alike or do they look different?

    4. Can you name one thing that all of these animals have alike? (feathers)

    5. In what other ways are these animals in the bird group alike? (beaks, wings, most lay eggs)

    6. Why do you think all of these animals belong to the group of birds?

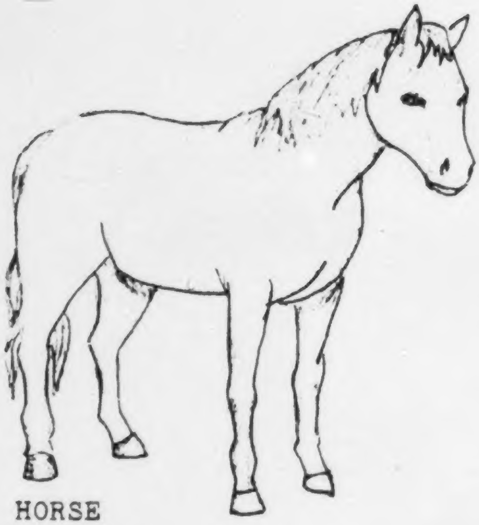
    7. How are the birds different from mammals?

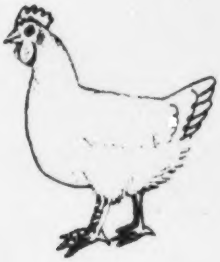
Display the bird group picture next to the mammal group picture and have the students compare and contrast these two groups of animals.

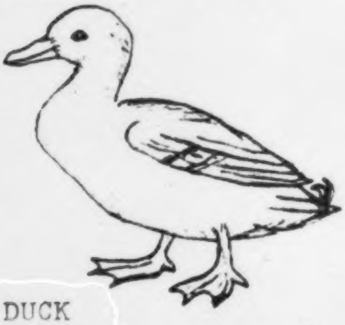
ACTIVITY 6:

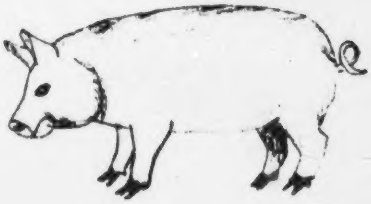
1. Review mammals and birds and their characteristics. Provide a worksheet in which the students will distinguish between mammals and birds. The students will cross out all the mammals and circle all of the birds. Have the students then discuss why these animals belong in the groups of mammals and birds. The worksheet can then be colored by the students.

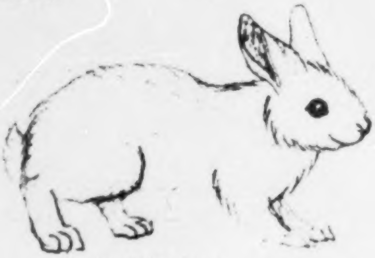
ACTIVITY #6 WORKSHEET LIVING THINGS
K-1

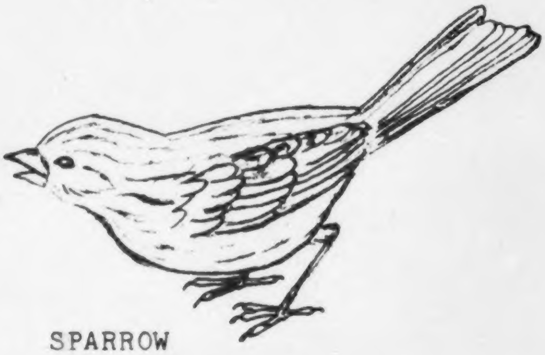

HORSE


CHICKEN


DUCK


PIG

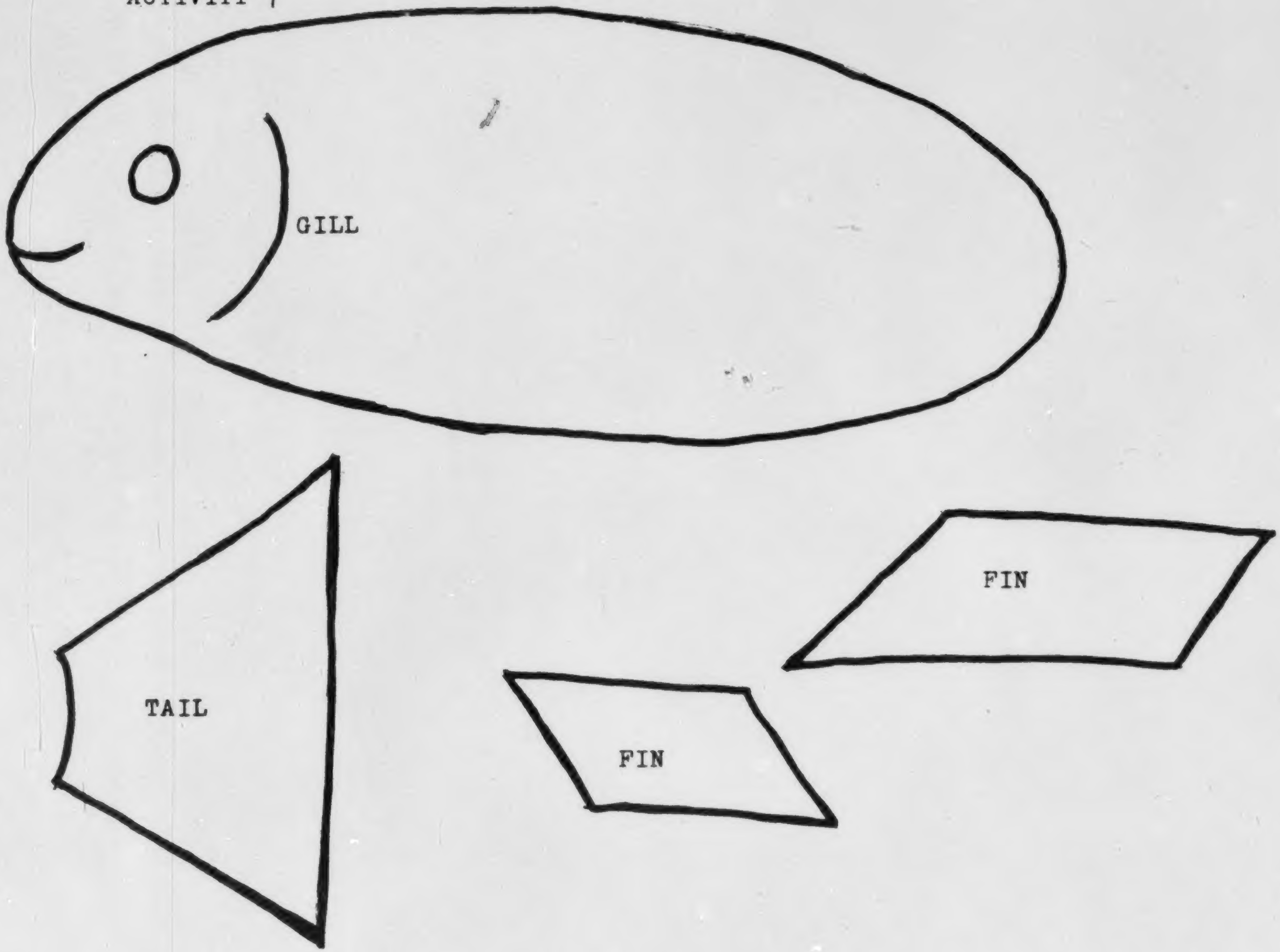

RABBIT


SPARROW

~~MAMMALS~~ [✓ BIRDS]

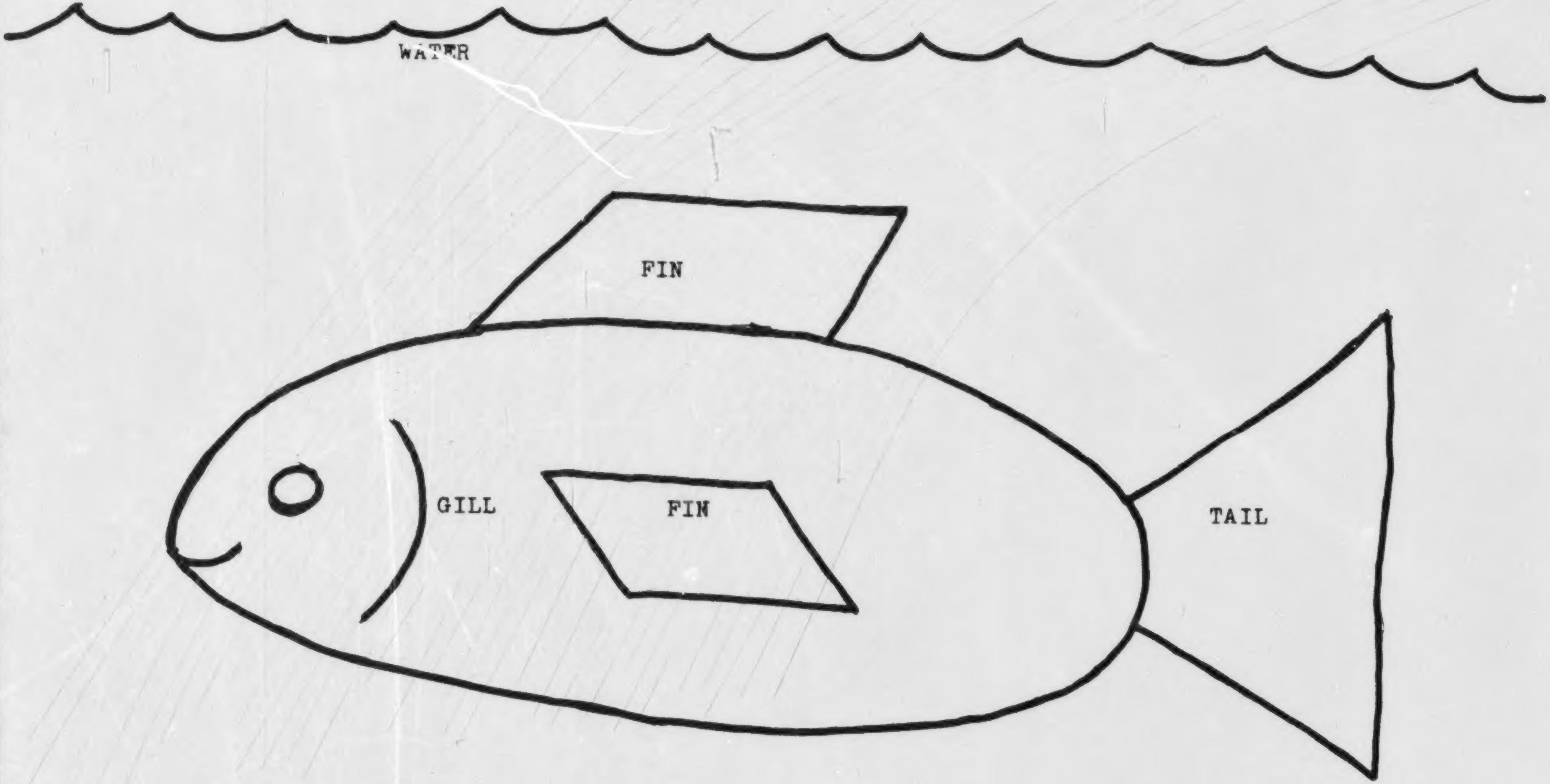
CONCEPT 3
ACTIVITY 7

FISH PUZZLE


GILL
TAIL
FIN
FIN

CONCEPT 3
ACTIVITY 7

FISH PUZZLE


WATER
FIN
GILL
FIN
TAIL

SAMPLE OF COMPLETED WORKSHEET

ACTIVITY 7:

1. Display a picture of a fish that shows the fins and gills as outstanding characteristics of the fish group. Discuss the habitat of fish, and how fish need and use fins and gills for living in the water. Talk about different sizes and kinds of fish. Some students may want to tell about fishing experiences or their father's fishing occupation.

2. Provide the students with the worksheet entitled "Fish Puzzle". The students will draw the gill on the fish's body in the proper place. They will then cut out all the fish parts and paste these parts on a separate sheet of construction paper in the proper order.

3. The students can color the background blue to show that fish live in water. Review that gills are used for breathing and fins are used for moving the fish through the water. (See student "Fish Puzzle" worksheet and sample of completed worksheet.) Suggested questions for this activity:

    1. What do you call this animal?

    2. Where does it live?

    3. Do all fish look alike?
       How are fish different?

    4. What body parts must fish have?
       What are these parts used for?

    5. Which parts of a fish help the fish to swim in the water?

    6. How many of you know how to swim? What parts of your body help you to swim? How do these parts help you?

    7. Which part of a fish helps a fish breathe in the water?

    8. Can you breathe underwater? Why not?

    9. What do you think happens to a fish when it is taken out of the water for a long time?

    10. How do fish help people?

    11. Where do fish get their food?

(Review food chain)

ACTIVITY 8:

1. The teacher can display a chart or transparency of pictures of various reptiles. (turtle snake, lizard, alligator) The following are suggested questions:

1. Can you name any of these animals? (Have a student point to an animal and name it.)

2. Where do you find each animal?

3. Do all of these animals look alike? How are they different?

NOTE: Students should realize that these animals belong to the same group (reptiles) but do not look alike.

4. Can you name one thing that all of these animals have alike? (scales and claws)

5. Why do you think all of these animals belong to the same group?

6. How are these animals (reptiles) different from mammals? birds, fish?

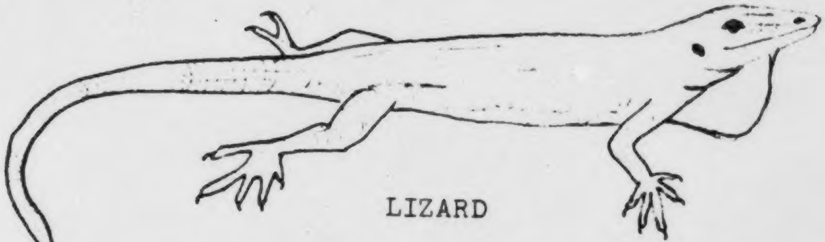
   (Review the main characteristics of the other animal groups previously studied.)

2. Divide the class into groups of four. Provide each group with a large strip of butcher paper that has been divided into four sections. Each group will draw the four animals that they talked about. (turtle, snake, lizard, alligator). Remind the students that they are drawing these animals together because they belong to the same group (reptiles).

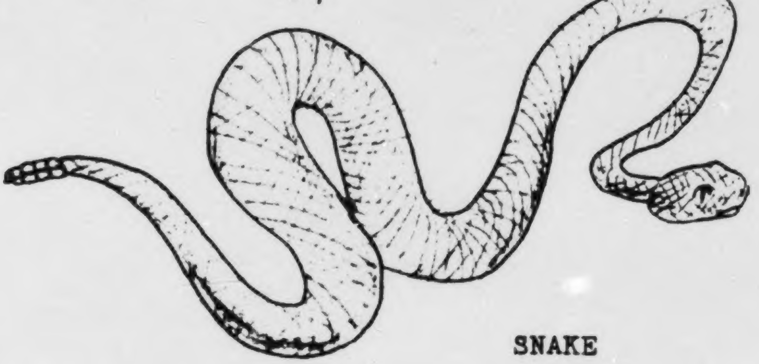
Display the drawings.

CONCEPT #3
ACTIVITY 8

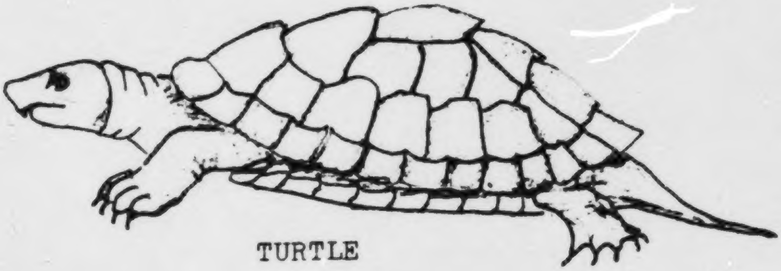
TRANSPARENCY ON REPTILES



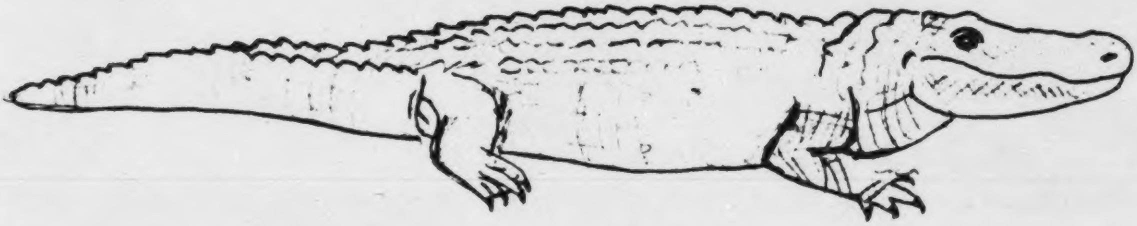
LIZARD



SNAKE



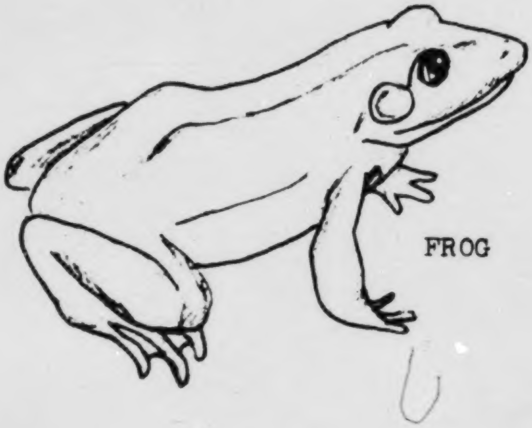
TURTLE



ALLIGATOR

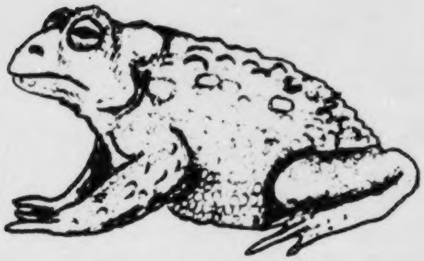
CONCEPT #3
ACTIVITY 9

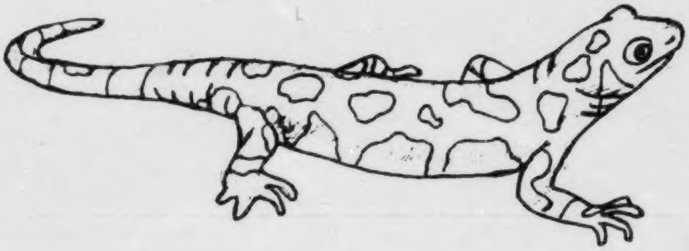
TRANSPARENCY ON AMPHIBIANS



FROG

TOAD





SALAMANDER

ACTIVITY 9:

1. The teacher can display the picture or transparency of pictures of various amphibians (frog, toad, salamander). The following are suggested questions:

    1) Can you name any of these animals? Note: Pupils may not recognize the salamander or may not see any differences between the frog and toad. Point out the frog, toad, and salamander as belonging to the same group.

    2) Where do you find each animal?

    3) Do all of these animals look alike or do they look different?

    4) Which two of these animals look most alike?

    5) Does the salamander look like another animal we have already studied? (lizard)
    Point out that lizard and salamander do belong to different groups even though they resemble each other.

    6) How does a frog's skin feel? So you think the toad and the salamander have the same type of moist skin?
    Point out that they do have moist skin.

    7) Why do you think these animals belong to the same group?

    8) How are these animals (amphibians) different from mammals? birds? fish? reptiles?

2. Review the main characteristics of the other animal groups previously studied:

    Mammals............hair or fur
    Birds.............feathers
    Fish..............gills and fins
    Reptiles...........scales and claws
    Amphibians.........moist skin

ACTIVITY 10:

Display pictures or a transparency showing a variety of insects. Discuss these by asking the following questions:

1. Can you name any of these animals? (Have a student go up to the picture and point to the insect that he is naming).

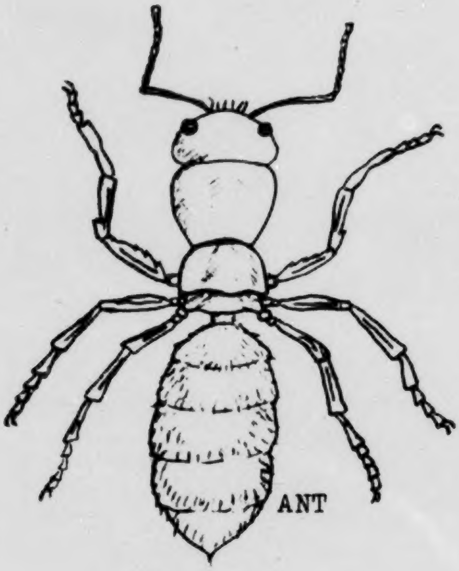
2. Where do you find each of these animals?

3. Do all of these animals look alike?

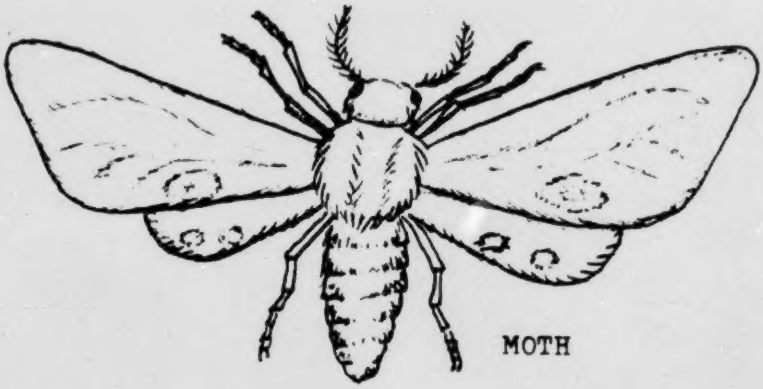
4. How are they different?
Tell the students that all of these animals belong to the insect group.

CONCEPT #3
ACTIVITY 10

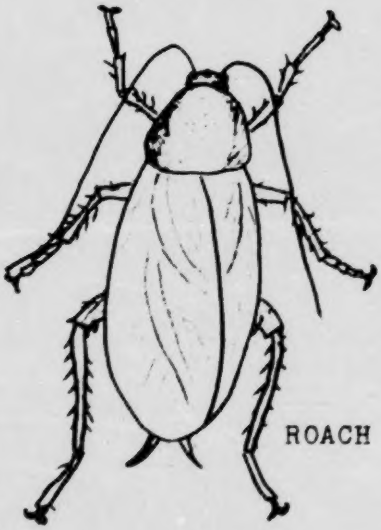
TRANSPARENCY ON INSECTS



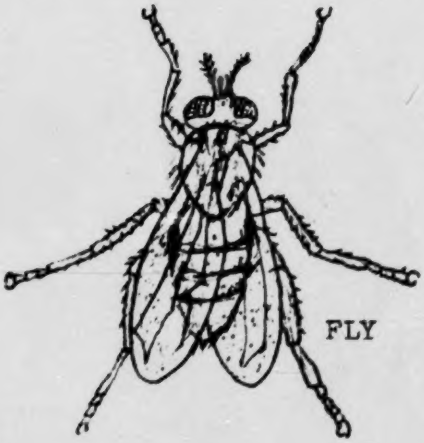
ANT



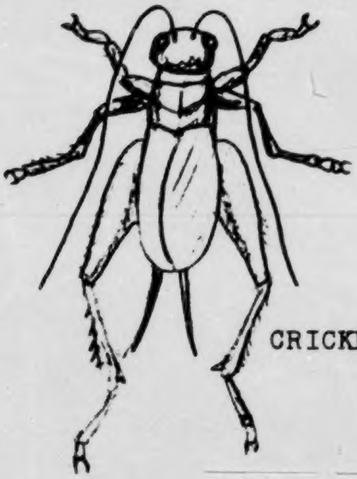
MOTH



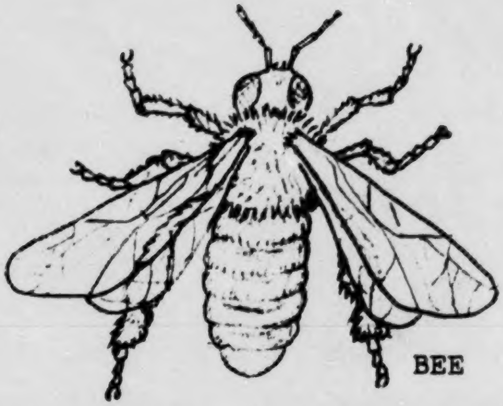
ROACH



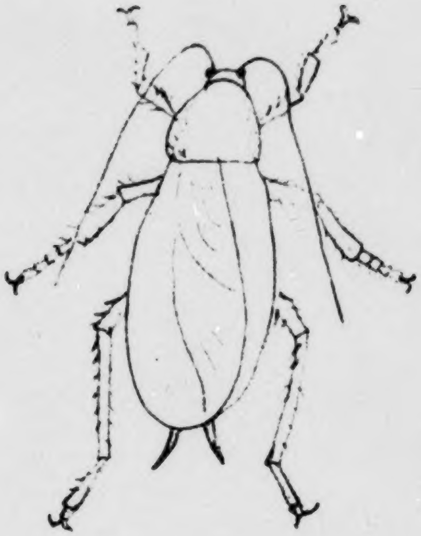
FLY

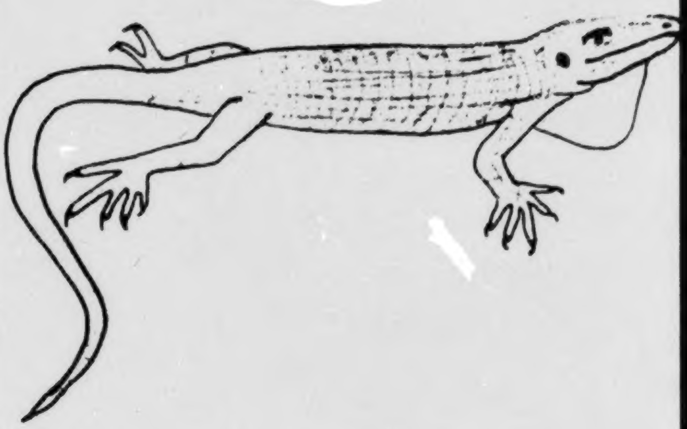


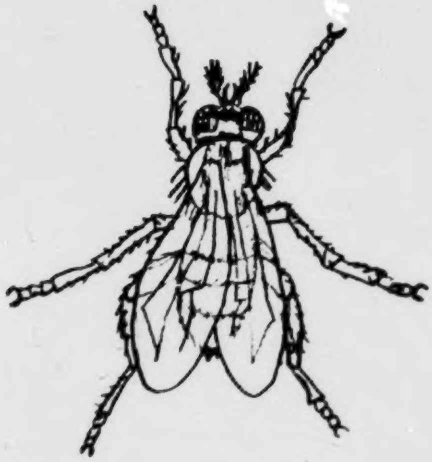
CRICKET

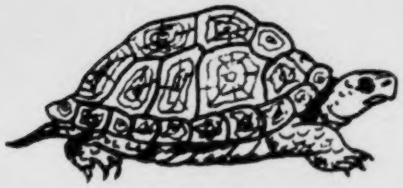


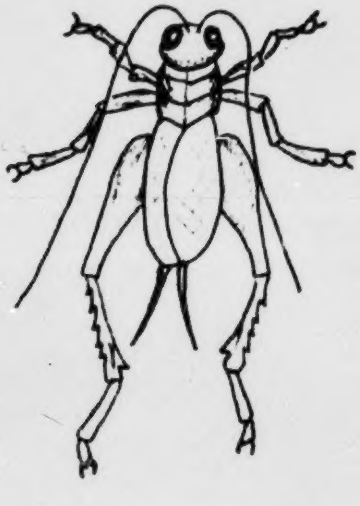
BEE

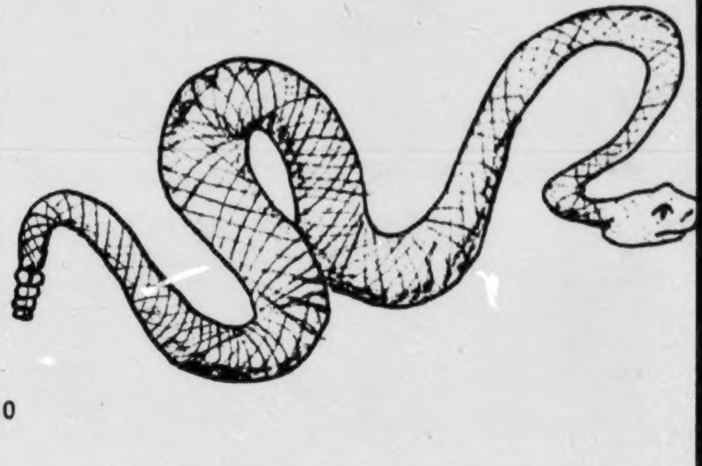


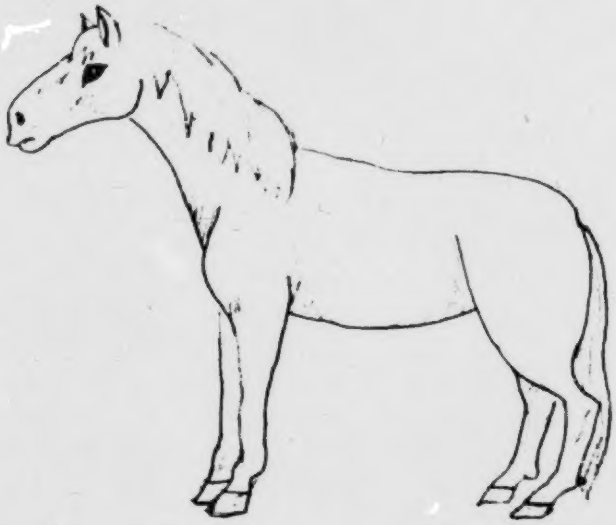


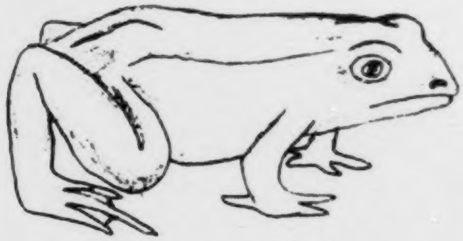


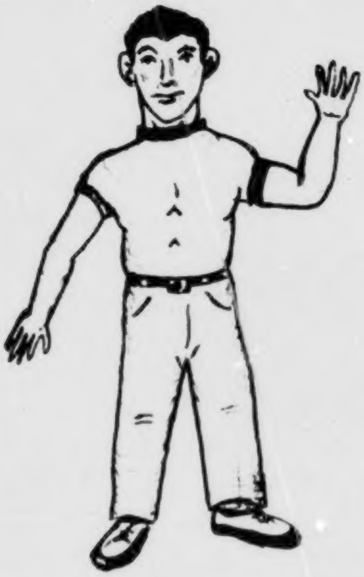


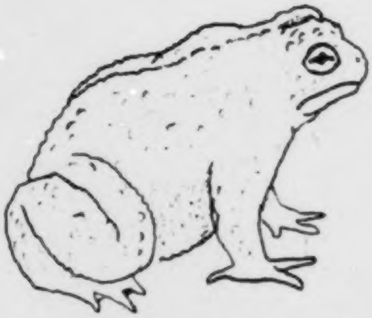


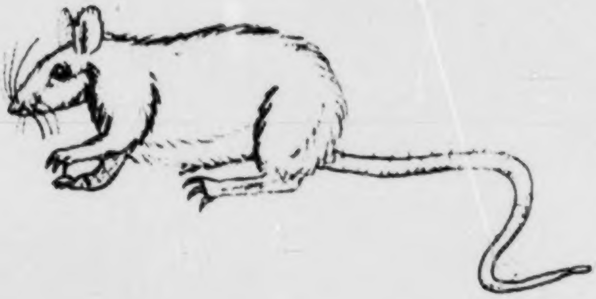


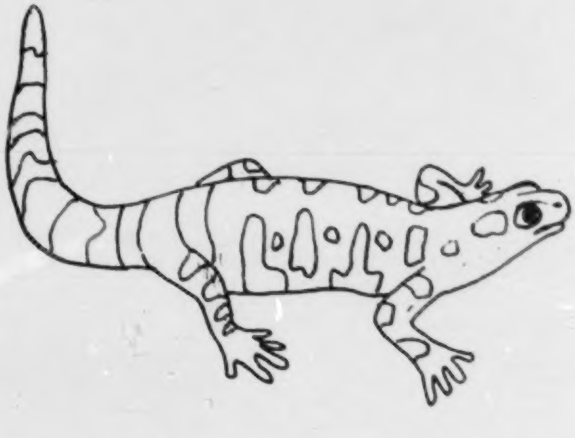


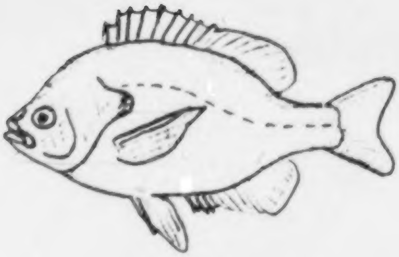


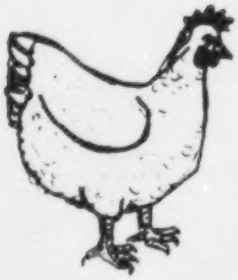


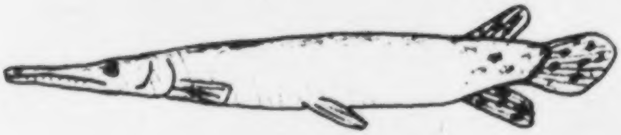


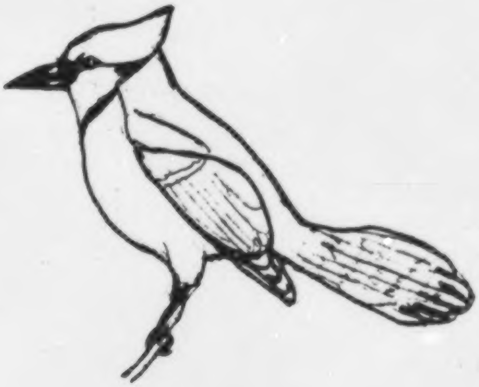


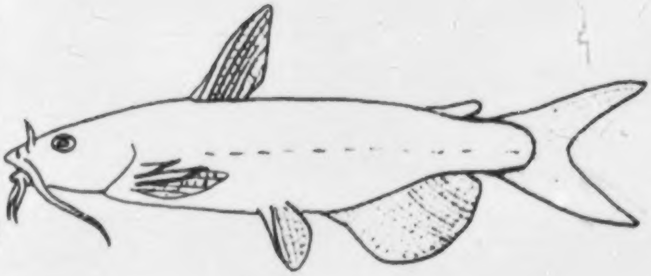


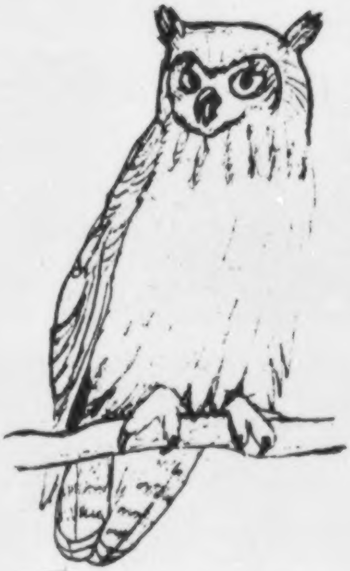












5. Look at these animals carefully. How are they all alike?

   a) All have six legs
   b) All have three body parts
   c) Most have wings
   d) All have antennae

6. Why do you think that all of these animals belong to the same group?

7. How are the insects different from mammals? birds? fish? reptiles? amphibians?

Following this discussion prepare the class for collecting insects. A container containing food and air holes should be available to keep the insects collected. An insect net can be used for collecting some types of insects. Take the class for an insect collecting walk around the school ground. The students can also collect some insects at home and bring these to school. The insects which are collected can be observed and studied by the student. In their observations they should notice each insect's main characteristics such as: six legs, three body parts, two antennae, and wings. After the insects die, they can be mounted to begin an insect collection for the class.

ACTIVITY 11:

In order to review the unit on living things, the students will be given an animal game in which they will group the animals according to the major characteristics of these groups.

1. Mammals...........fur, hair
2. Birds.............feathers
3. Fish..............gills and fins
4. Reptiles..........scales and claws
5. Amphibians........moist skin
6. Insects...........six legs, 3 body parts

The students will be given a set of animal cards mixed up and they will then arrange each card into the proper group. This game can later be competitive when students or groups of students are timed to complete the grouping of the animal cards correctly. The teacher can vary the number of animal cards for this game according to the ability of the students playing the game.

ACTIVITY 12

As a culminating activity a science resource person from the St. Martin Parish Science Center could display and discuss various familiar stuffed animals from each of the six animal groups studied in the previous activities.

QUESTIONS

1. What is a living thing? non-living?
2. How do you know when something is living? non-living?
3. What are the two groups of living things?
4. How are plants and animals alike? How are they different?
5. How do animals help us? How do plants help us?
6. How do plants help animals?
7. How do animal help other animals?
8. How do non-living things help animals? Plants?
9. What would happen to plants or animals if there were no air? water? sunlight? soil?
10. What would happen if there were no plants in the world?
11. What would happen if there were no animals in the world?
12. How do you know that some animals belong together?
13. If you saw an animal and wanted to place it in its proper group, what would you look for to know that it is a mammal? bird? fish? reptile? amphibian? insect?
14. Why aren't all animals grouped in the same group?
15. Do all animals live in the same place? Why not?
16. Why can some animals live in water? What do you call this group of animals?
17. Can you live in water? Why not?
18. If you could be any animal in the whole wide world, which animal would you want to be? To what animal group would you belong? Why?
19. Which animal would you not want to be ? Why?
20. How do animals help people?

VOCABULARY

LIVING THINGS
MOVING
EATING
GROWING
DIFFERENT
FISH
WATER
AIR
FOOD CHAIN
PETS
BIRDS
AMPHIBIANS
FUR
GILLS
SCALES
MOIST SKIN

NON-LIVING THINGS
BREATHE
DRINKING
SAME
INSECTS
TURTLES
SUNLIGHT
SOIL
ANIMALS
MAMMALS
REPTILES
HAIR
FEATHERS
FINS
CLAWS

RESOURCE MATERIALS

Rockcastle, Salamon, Schmidt. Elementary School Science. (Primer) Addison - Westley Publishing Co., 1972.

Brandwein, Cooper, Blackwood, Hore, Fraser. Concepts in Science. Harcourt, Brace Jovanovich, Inc. 1972.

Ware, Kay L. and Hoffsten, Gertrude B. "You Find Out". Steck-Vaughn Co., 1970.

Rockcastle, Salamon,Schmidt. Elementary School Science Book 1. Addison-Westley Publishing Co., 1972.

EECD

TEACHER MATERIAL EVALUATION

UNIT____ GRADE______ ITEM EVALUATED__________________

1. Were the number of activities sufficient? ____________________

____

2. Was all required material readily available?_________________

____

3. Did the material lend itself to correlation with your usual science curriculum?___________________________________

____

4. Did the number of students in the class(es) affect the manner in which materials were used?_____________________________

____

5. Did the students comment on the materials?___________________

____

Students' comments:____

____

____

____

6. Did the materials fit the ability of the students?____________

____

7. Did you use other resources of materials?_____________________

____

What were they?____

EVALUATOR________________________

TEACHER ACTIVITIES EVALUATION FORM

GRADE________ UNIT EVALUATED__________________

CONCEPT NO.	ACTIVITY NO.	EVALUATION:			
		EXCELLENT	GOOD	FAIR	POOR

COMMENTS:

UNIT 2 SOIL

Soil is a real treasure. It is treasured because living things depend on it, you depend on it.

Good garden soil is made of two main kinds of materials. It is made of materials from rock, sand, and pebbles. It is made of materials from living things, from plants and animals.

Material from plants and animals breakdown in time. We call the breaking down decay. As plants and animals decay, they form humus. Humus is made from parts of decayed plants and animals.

Soil is made up of materials from rock, and of humus. But that's not all. You can find out what else is in soil by investigating.

Soil usually has mineral in it. Soil usually has water and air in it. Air is trapped in the spaces between bits of soil. When water is added to soil, some of the soil is pushed out as bubbles.

There are different kinds of soils. Some soil is mainly sand. Some is mainly humus. You remember that humus is from decayed parts of plants and animals. Garden soil is another kind.

Soil is one of our greatest treasures. Soil must be used wisely, or conserved. How can we conserve soil rich in minerals. But no plants grow there. There is never enough water to dissolve the minerals so that plants can use them. If we can bring water to these deserts, the soil can be used for farming. The soil is then conserved.

CONCEPT #1:

To locate pictures showing stages of soil erosion.

OBJECTIVES:

The student will:

1. Observe the stages of soil erosion. Performance level to be determined by the teacher.
2. List reasons why soil erosion is very costly. Performance level to be determined by the teacher.

ACTIVITIES:

#1. Allow pupils to find or draw pictures showing soil erosion.

#2. Take pupils on a field trip around the campus to look for signs of soil erosion.

#3. Invite a farmer in to share information about soil erosion.

#4. The pupils can make a mural showing all stages of soil erosion.

#5. Find a picture of a place where soil has been washed or blown away. If you cannot find a picture, draw one here, showing how such a place would look.

CONCEPT #2:

The importance of soil to plant growth.

OBJECTIVES:

The student will:

#1. Discuss how soil is important to plants. Performance level to be determined by the teacher.

#2. Observe how plants use soil. Performance level to be determined by the teacher.

#3. List the different types of soil used for plant growth. Performance level to be determined by the teacher.

ACTIVITIES:

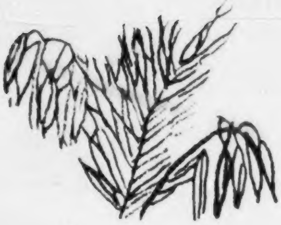
#1. Students can collect soil samples to determine the different kinds of soil.

#2. Allow students to plant seeds in each kind of soil to determine which is best for plant growth.

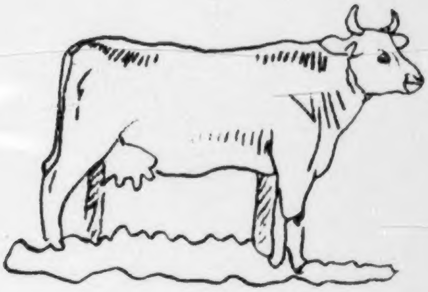
#3. Visit a new house development to see the different layers of soil.

#4. Have pupil to circle those things that depend on soil or water. (See student worksheet)

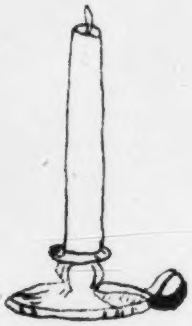
WHICH OF THESE DEPEND ON SOIL AND WATER? EXPLAIN YOUR ANSWER.



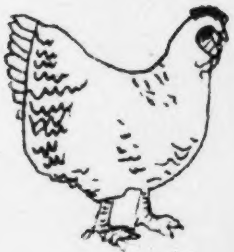
WHEAT PLANT



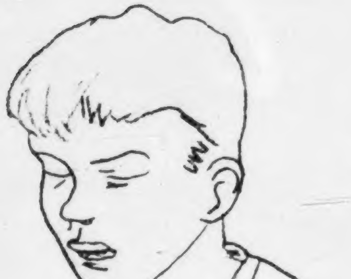
COW



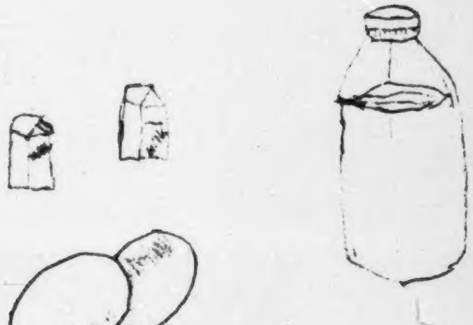
CANDLE



CHICKEN



YOU



EGGS

CONCEPT #3:

Soil is made up of tiny broken particles of rock mixed with other materials.

OBJECTIVES:

The student will:

#1. Observe that soil has layer of varying thickness. Performance level to be determined by the teacher.

#2. Identify properties of the soil. Performance level to be determined by the teacher.

#3. Infer that minerals and acidity of soil are factors in plant growth.

ACTIVITIES:

#1. Allow pupils to discuss how the earth might have looked before life was here.

#2. Students can be taken outside to the school yard and collect soil samples.

#3. Pupils can use their samples to do these activities.

(See students worksheet)

STUDENT WORKSHEET

TO ACCOMPANY: CONCEPT #3 ACTIVITY #3

TASK:

Soil samples.

MATERIALS NEEDED:

a cupful of sandy, light-colored soil

a cupful of topsoil

a magnifying lens, a strainer, paper

PROCEDURES:

1. Feel both soils. How do they feel different?
2. Smell both soils. How do they smell different?
3. Put each soil through a strainer. What falls through the strainer?
4. What is left? Observe these things. Use a magnifying lens.

QUESTIONS:

1. In which soil are there more bits of plant materials?

   ____

2. In which soil are there more bits of sand and rocks?

   ____

QUESTIONS

1. What is soil?
2. What kind of soil do plants grow best in?
3. Which animals are most helpful to soil?
4. How is soil formed?
5. Which type of rock will break more easily to form soil?
6. Name some things that carry away the soil.
7. When will rain wash away soil more easily?
8. What is soil erosion?
9. What is mineral?
10. Name some materials that soil is made from.

VOCABULARY

EROSION: The wearing away of the land surface by wind or water.

MINERAL: Any substance not animal or vegetable in origin.

SOIL: The loose top layer of the earth's surface.

RESOURCE MATERIALS

BOOKS AND BOOKLETS

Holmes, Neal J., Leake, John B., Dviatt, Charles D. Nicholas, Peter W. *Science*. Webster Division, McGraw-Hill Book Co. New York, 1974.

Rockcastle, Verne N. Salamon, Frank R. Schmidt, Victor E. *Elementary School Science*. Addison-Wesley Publishing Co. Menlo Park, California, 1972.

Schneider, Herman and Nina. *Science For Here and Now*. D.C. Heath and Co. Boston ,1968.

EECD

TEACHER MATERIAL EVALUATION

UNIT____ GRADE______ ITEM EVALUATED____________________

1. Were the number of activities sufficient? ______________________

____

2. Was all required material readily available?____________________

____

3. Did the material lend itself to correlation with your usual science curriculum?____

____

4. Did the number of students in the class(es) affect the manner in which materials were used?_____________________________________

____

5. Did the students comment on the materials?______________________

____

Students' comments:____

____

____

____

6. Did the materials fit the ability of the students?____________

____

7. Did you use other resources of materials?_______________________

____

What were they?____

EVALUATOR__________________________

TEACHER ACTIVITIES EVALUATION FORM

GRADE________ UNIT EVALUATED____________________

CONCEPT NO.	ACTIVITY NO.	EVALUATION:			
		EXCELLENT	GOOD	FAIR	POOR

COMMENTS:

UNIT 3 AIR

Air is a real substance that has weight and occupies space all around us. Although pure air is a real substance that can be felt, it has no odor, color, or shape.

Air is important in many ways. All living things depend on air in which to live. People, plants, and animals use the oxygen from the air for breathing. Man also uses air for moving windmills, airplanes, sailboats, etc.

When air moves it is called wind. Wind can be helpful as well as harmful. It is helpful in that it dries clothes, carries seeds, provides an area in which birds can fly, etc. Wind becomes harmful when it is capable of destruction; such as, tornadoes, hurricanes, storms, etc.

Man can make the air harmful through various means of pollution. Some of these include industrial waste, exhaust fumes from motor vehicles, smoke from burning trash, etc. As a result of air pollution clean useful air becomes limited.

Noise pollution, which is carried through the air, occurs when people are exposed to excessively loud sounds in their environment. It becomes a health hazard when people are partially or totally deafened by these sounds.

After recognizing the harmful affects of air pollution, man should take proper steps to control and partially eliminate the sources causing this air pollution.

CONCEPT #1:

Air is all around us.

OBJECTIVES:

#1. The students will recognize that air is all around.

#2. The students will identify objects that use air.

ACTIVITY 1:

Place an empty suit box on a table. Tell the students that something is in the box and allow them to look in the box to see if they can find anything. Ask the following suggested questions:

a) What is in the box?

b) Can you see anything?

c) Can you feel anything? Can you touch it?

Have a student put the lid on the box quickly so that all students will be allowed to feel the rush of air as the lid is pushed down. The students should now be able to identify what they felt as air.

Tape the box shut so that air cannot escape. Discuss the following:

a) What is in the box?

b) How did it get in the box?

c) Why did we tape the box closed?

d) How can we make the air come out of the box without opening it?

Make a small hole in the lid with a pencil. As one student pushes down on the box, have another student hold a paper streamer over the hole. Discuss what heppens.

Suggested Questions:

a) What was trapped in the box?

b) Why did we make a hole in the lid?

c) What happened to the paper streamer? Why did it move?

d) How did the air come out of the box?

e) Suppose you put your hand over the hole, what would you feel?

f) How do you know that there is air in the box?

g) Is air only in the box? Where else can you find it?

ACTIVITY 2:

Give the students balloons, contruction paper and straws. Ask the following questions:

a) Can you see air?

b) Can you feel air?

c) How can you use the things I gave you to find out if you can feel air?

The students will then experiment with the materials provided. They can blow up balloons and feel the air escape. Fans can be made from the construction paper and they can fan themselves and feel the air. They can blow through the straws and feel the air that comes out. A discussion will follow on how they were able to feel the air and how they know if air is present. The following are suggested questions:

a) What things did you use to find out about air?

b) How did you put air into the balloon? What happened to the balloon when the air went in it?

c) How did you let the air out?

d) Could you feel the air coming out?

e) Could you see the air coming out?

f) What did you feel when you fanned yourself? Why?

g) Why did air come out of the straw?

h) Could you feel or see this air?

i) What would have happened if you closed the other end of the straw?

j) What other things can you use to know that there is air around you?

k) Is air all around you? How do you know?

l) How do people use air?

m) What other things use air? How?

CONCEPT #2

Wind is air that is moving.

OBJECTIVES:

#1. The students will recognize that wind is moving air.

#2. The students will determine ways wind moves things.

ACTIVITY 1:

Tape streamers to the front of an electric fan. Have the students notice that the streamers do not move when the fan is off. They will then observe what happens when the fan is turned on.

Suggested questions:

1) Why didn't the streamers move when the fan was off?

2) Was there air around the streamers when the fan was off?

3) Why didn't this air move the streamers?

4) What happen when we turned the fan on? Why?

5) What caused the air to move the streamers?

6) What do you call this air?

7) Where else can you feel wind?

8) What other things are moved by wind?

9) What is wind?

10) Can wind ever be dangerous? When?

ACTIVITY 2:

Provide a container of water, a small toy boat, and a balloon. Have the students suggest ways by which the boat could be moved on the water (pushing, blowing, fanning). Place the boat in the water and blow up the balloon. Holding the balloon near the boat slowly let the air out of the balloon so that the air moves the boat. The students could also blow on the boat or fan the boat to make it move.

Suggested questions:

1) How did you get the boat to move?

2) What moved the boat each time?

3) Which way moved the boat fastest? Why?

4) Are all boats moved only by air? How do you know?

5) What other things are moved by air?

6) How can air help you?

7) When can you feel air?

8) Can you see air when it moves?

9) How do you know that air does move?

ACTIVITY 3:

Through the use of a transparency or a ditto entitled "Wind Is Moving Air", the teacher will lead the class in a discussion of wind as moving air. The following are suggested questions to be used with the appropriate pictures:

Picture a) What kind of boat is this? How does wind move this boat?

Picture b) What is in this picture? How did the kite get up in the air? Why won't a kite fly when there is no air? Why won't a kite fly when there is no wind?

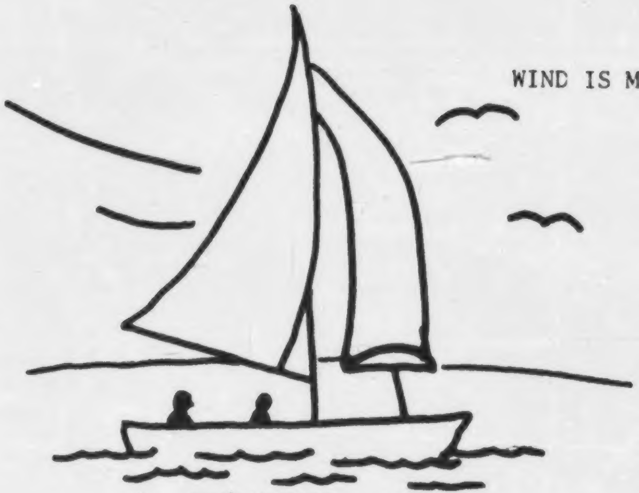
Picture c) What is in this picture? Where do you find clouds? Do clouds move in the sky? How?

Picture d) What is in this picture? What are airplanes used for? How does the wind help an airplane? How does an airplane make its own wind?

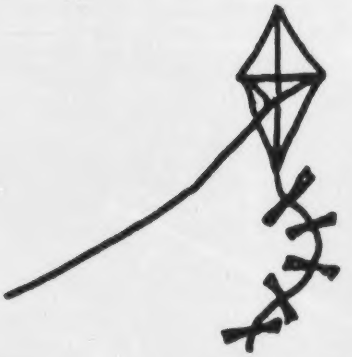
Picture e) What is in this picture? What is the man in the picture doing? Why are parachutes used? How does a parachute use wind? How do parachutes help people?

Picture f) What is in this picture? Is this harmful or helpful? Why? What does wind have to do with this picture? When else is wind harmful?

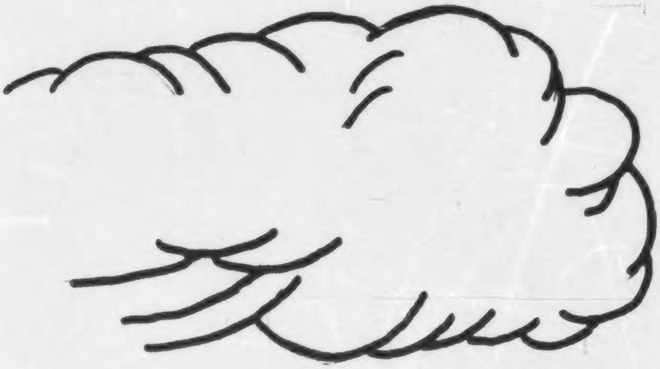
WIND IS MOVING AIR



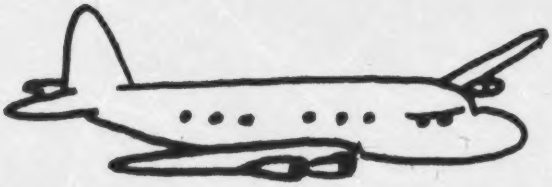
A. WIND MOVES A SAILBOAT.



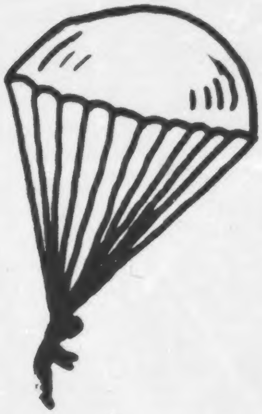
B. WIND CAN FLY KITES



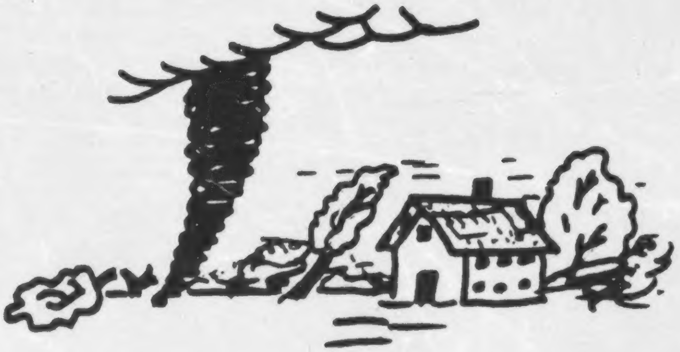
C. WIND MOVES CLOUDS.



D. AIRPLANES USE WIND



E. WIND CAN SAVE A
MAN'S LIFE.



F. WIND CAN ALSO BE
HARMFUL

CONCEPT #3:

Air pollution is harmful.

OBJECTIVES:

The student will:

1. Observe some causes of air pollution. Performance level to be determined by the teacher.

2. List five causes of air pollution in your area. Performance level to be determined by the teacher.

3. The students will determine ways to stop air pollution.

ACTIVITY 1:

Obtain a piece of waxed paper approximately one square foot in size. Tack it to a piece of stiff cardboard. Spread vaseline over this paper and hang it in an open area where it can remain undisturbed for at least a week. At the end of this time, the students will examine the materials which stick to the vaseline with a hand lens.

Suggested questions:

1) Why did we put vaseline on the waxed paper?

2) How does the waxed paper look?

3) What do you think made it look this way?

4) Where did this come from?

5) By looking at this paper do you think our air is clean? Why? Why not?

6) How do you use air?

7) Do you think its better to breathe clean air or polluted air? Why?

8) What can people do to stop air pollution?

ACTIVITY 2:

Students will find and cut out pictures which show sources of air pollution from old magazines. These pictures can be arranged to:

a) make a mural showing air pollution

b) construct a bulletin board
c) make a class booklet
d) prepare anti-pollution posters

Following one of the above activities a discussion on the sources and effects of air pollution could be used to culminate the activity.

ACTIVITY 3:

As a home assignment, the students will look for sources of air pollution at home or in their neighborhood (exhaust fumes from motor vehicles, smoke from burning trash or leaves, industrial waste "soot, smoke"). After reporting their findings these sources could be listed on a chart or chalkboard. The students could then choose and illustrate on art paper one of the forms of air pollution and its source.

QUESTIONS

1. Can you see, smell, taste, or feel air?
2. Is air all around? How do you know?
3. What things do you know of that show you that air is all around? (Balloons, balls, fans, airplanes, tires, etc.)
4. How do people use air?
5. Do plants and animals use air? How?
6. Can air move? How do you know?
7. What do you call moving air? (wind)
8. Is wind helpful? How?
9. Is wind harmful? How?
10. How is a blowing fan like the wind?
11. How does air become polluted?
12. How is air pollution harmful?
13. What can people do to help air pollution.
14. What would happen if all of our air was polluted?
15. What is noise?
16. When does noise become harmful?
17. How does noise harm you?
18. What do you think would happen to you if all the sounds in the world were very, very loud? Would you like it? Why not?
19. What would the world be like if you could not hear any sounds?
20. Do you think that hearing is important? Why?

VOCABULARY

- AIR
- PUSHING
- FANNING
- AIRPLANE
- PARACHUTE
- AIR POLLUTION
- WAX PAPER
- SOOT
- MOTOR VEHICLES
- FAN
- NOISE
- HEARING
- DANGEROUS
- UNPLEASANT
- SOFT
- WIND
- BLOWING
- CLOUDS
- HARMFUL
- KITE
- VASELINE
- SMOKE
- TRASH
- INDUSTRIAL WASTE
- STREAMERS
- EARS
- ESCAPE
- SKY
- LOUD
- SOUND

RESOURCE MATERIALS

BOOKS:

MacCracken, Helen Dolman, Ballou, Mildred T. Science Through Discovery 1, Teacher's Edition L.W. Sinter Company, Inc., New York, Brandon, Miss., Dallas, Des Plaines, Ill., Menlo Park, California, 1968

Ecology Coloring Book, The Environment We Live In, Nupaca, White Sulphur Springs, N.Y., 1971

D.F. Wentworth, J.K,: Couchman, J.C., MacBean, A. Stecher, Pollution Examing Your Envorinment, Holt, Rinehart, and Winston of Canada, Limited, 1971

FBCD

TEACHER MATERIAL EVALUATION

UNIT____ GRADE_____ ITEM EVALUATED____________________

1. Were the number of activities sufficient? ____________________

   ____

2. Was all required material readily available?__________________

   ____

3. Did the material lend itself to correlation with your usual science curriculum?_______________________________________

   ____

4. Did the number of students in the class(es) affect the manner in which materials were used?___________________________

   ____

5. Did the students comment on the materials?____________________

   ____

   Students' comments:____

   ____

   ____

   ____

6. Did the materials fit the ability of the students?____________

   ____

7. Did you use other resources of materials?_____________________

   ____

   What were they?____

EVALUATOR__________________________

TEACHER ACTIVITIES EVALUATION FORM

GRADE________ UNIT EVALUATED____________________

CONCEPT NO.	ACTIVITY NO.	EVALUATION:			
		EXCELLENT	GOOD	FAIR	POOR

COMMENTS:

UNIT 4 WATER

Water is the most important substance needed by all living things. Without water, plants and animals could not survive. Besides being essential for life, water has many other uses. Man uses water for drinking, washing, cooking, playing, and many other purposes. To remain useful our water supply must remain clean through the use of protective measures guarding against pollution.

Water, which is of prime importance to living things, can become impractical for use if made unclean. This can be done by the careless addition of unnecessary substances to our water supply which is continually replenished by the natural water cycle occuring in nature.

Through the water cycle nature maintains a balance of water. Man is destroying this natural balance by careless pollution of our oceans, rivers, streams, ponds, and ground water. If this is allowed to continue our useful water supply will become extremely limited.

By man's careful control of water pollution he will maintain an adequate water supply which is essential for the survival of all living things.

CONCEPT #1:

All living things need water.

OBJECTIVES:

#1. Identify at least five living things that needs water to live.

#2. Name three common uses of water.

#3. Recognize how unclean water can be made harmful to living things.

ACTIVITIES:

#1. The teacher will take her class on a walk to a nearby bayou or pond, or the pond at the Nature Trail. Each child will point out the plants and animals. When the class returns to the classroom, each child will draw a picture of the many plants and animals that he observed.

#2. Filmstrip: "A Visit To The Pond"
After viewing the filmstrip, the students will discuss the living things found around or living in the pond.

#3. To make children aware that they need water because they are living things, each child will be allowed to drink water.

#4. Students will observe what happens if one flower receives water and one flower does not.

#5. Following a discussion on the uses of water, or a field trip through the school building or around the school ground, an experience chart will be made. (See attached sheet)

#6. Provide children with old magazines to find and cut out pictures of living things using water. They will then divide the pictures into categories and paste on a chart.

#7. Film: "We Explore The Stream" color, 11 min.

Paul and Mary look for snails in an acquarium in a stream. They observe many of the plants, fish, birds, and insects common to a stream environment. (Instructional Center - Breaux Bridge)

#8 Examine pictures of polluted water and discuss its harmful effects on living things.

EXPERIENCE CHART

TO ACCOMPANY: CONCEPT #1 ACTIVITY #5

USES OF WATER

SUGGESTED CATEGORIES:

1. Home
2. School
3. Play

BEST COPY AVAILABLE

CONCEPT #2:

Water can be kept clean.

OBJECTIVES:

#1. Students will identify clean and unclean water.

#2. Students will convert clean water into unclean water.

ACTIVITIES:

#1. Have students observe samples of clean water (tap) and unclean water (bayou). Discuss the similarities and differences between the two.

Guide Questions:

a. Which container of water is clean? unclean?

b. Which would you like to use and drink? Why?

#2. Provided with two large clear containers filled with clean water, the students will demonstrate the pollution of water by daily additions or various materials, such as: dirt, paper, chalk, orange peel, gum wrappers, bottle caps, etc.
Have the students determine which is clean and which is unclean and why. Label each container accordingly.

CONCEPT #3:

Water falls to the earth and goes back up into the air.

OBJECTIVES:

#1. The students will explain the water cycle.

#2. Students will rearrange the basic components of the water cycle.

ACTIVITIES:

#1. Have students collect a container of rain water and allow it to evaporate. Discuss the results.

#2. Have one student wash a small section of the chalkboard while the class observes the board as it dries. Discuss what happened to the water.

#3. Using the parts of the water cycle as provided on the worksheet, the students will place them in proper order. (See worksheet)

#4. Using transparency entitled, "Where did the water go?" have a class discussion on the evaporation of water using the suggested questions:

Morning Scene

a. What is Johnny doing?

b. Do you think he's having a good time? How can you tell?

c. How did the water get there?

d. Is it day or night? How do you know?

e. What do you think will happen if Johnny comes back that afternoon to float his boat?

Afternoon

a. How does Johnny look? Why?

b. Where did the puddle go?

c. Will Johnny be able to sail his boat? Why?

d. When will there be another puddle for Johnny"s boat?

e. Where will it come from?

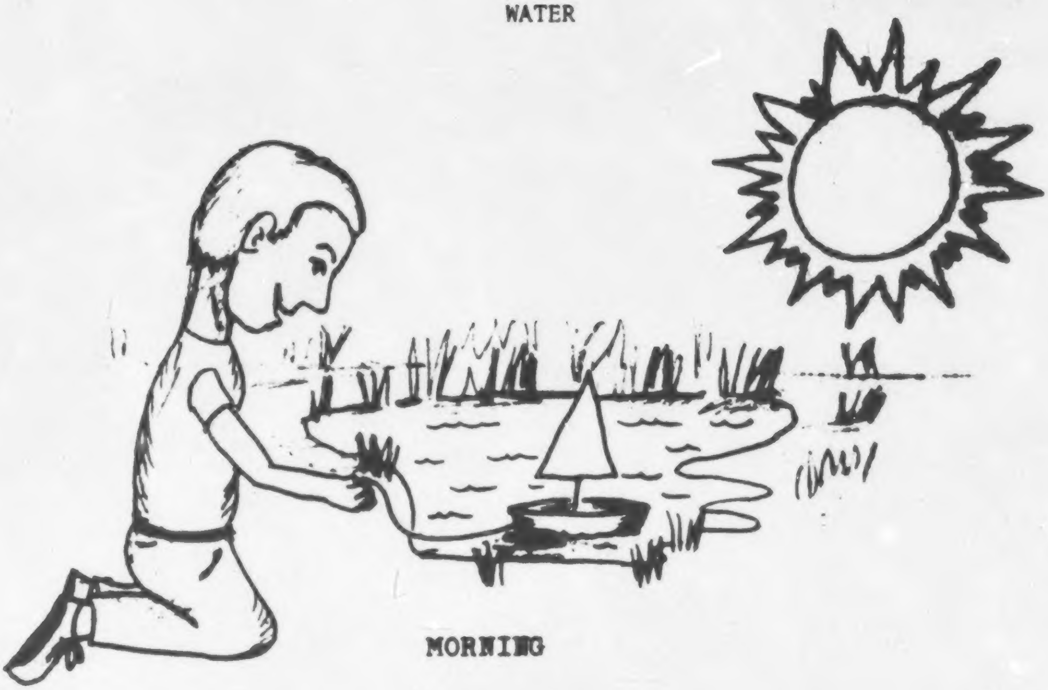
f. What happens to puddles that you have played in?

g. Would the puddle go away faster on a cloudy day or a sunny day? Why?

STUDENT WORKSHEET

TO ACCOMPANY: CONCEPT #3 ACTIVITY #3

WATER



MORNING

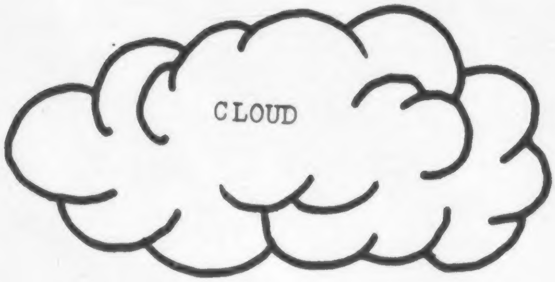
WHERE DID THE
WATER GO?

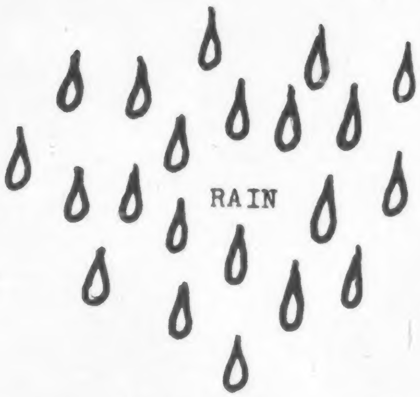
AFTERNOON

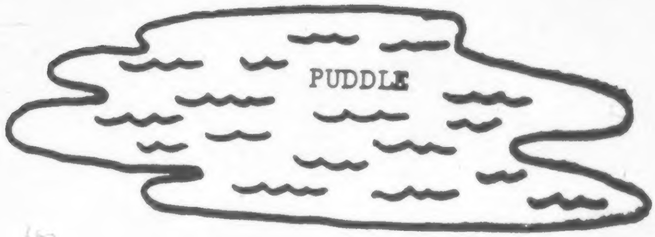
STUDENT WORKSHEET

TO ACCOMPANY: CONCEPT #3 ACTIVITY #3

WATER







CONCEPT #4:

Water dissolves many materials.

OBJECTIVE:

The student will carry out activities to observe ways some solid substances dissolve in water.

ACTIVITIES:

#1. Have students to bring dissolving materials from home. (Gelatin, corn starch, powdered paint, plaster, instant tea or coffee, sand, soil or baking soda). Before they dissolve the materials, have them decide what questions they want to answer with their observations:

a) What did the solid look like before it dissolved? They will use magnifying lens to see what the crystal looked like. They may draw the crystal or grain and tape a sample of the substance to their picture.

b) How did the solid act when added to water? They may take a picture of this or draw a series of pictures illustrating what happened.

c) How did the appearance of the water change? Did it remain clear, translucent, cloudy?

CONCEPT #5:

Polluted water can damage living and non-living things.

OBJECTIVES:

#1. The student will identify pictures of polluted water.

#2. The student will discover that clean water is important to living things.

ACTIVITIES:

#1. Have students describe all the ways they use water and have seen it used. List responses on board and have students sketch an illustration to fit each suggestion. Ask a volunteer to circle all uses that make water dirty or unfit to drink.

#2. Have students look through magazines for pictures of polluted water. Ask the students who they think is responsible for the pollution. Ask them what they can do as individuals to avoid polluting. The students along with the teacher will write a story on "How to Stop Pollution". They will write it on a chart and paste pictures on the chart. The chart should be placed where it can be seen by the most students at the school.

#3. The teacher will demonstrate that clean water is important to living things. (See sheet)

#4. Make a scrapbook of pictures showing how people, animals and plants use clean water.

DISCUSSION QUESTIONS

1. What would happen if we had no water?
2. What would happen if it wouldn't rain?
3. How do you use water at home? at school? at play?
4. What would happen to you if you had no water to drink?
5. What would happen to a living thing (flower, grass, cat, dog) that didn't get water?
6. When it rains where does the water go? How do you know?
7. How do you make water unclean? What would happen if you did?
8. What would happen if we only had unclean water?
9. What could you do to help keep your water clean?
10. List some materials that will dissolve in water?
11. Who do you think is responsible for polluting our water?

VOCABULARY

LIVING THINGS

WATER

ANIMALS

AQUARIUM

POND

CLEAN WATER

EARTH

RAIN

PUDDLE

NON-LIVING THINGS

PLANTS

FLOWER

STREAM

BAYOU

UNCLEAN WATER

AIR

CLOUDS

RESOURCE MATERIALS

FILMS:

"We Explore the Stream" 11 min. color
Source: St. Martin Parish Instructional Center
Breaux Bridge, La.

FILMSTRIP:

"A Visit to the Pond" from Series Discovering Life Around Us.
Source: St. Martin Parish Instructional Center
Breaux Bridge. La.

SLIDES:

"Barbara Learns About Soil and Water"
"Water for Everybody"
Source: St. Martin Parish Instructional Center
Breaux Bridge, La.

TRANSPARENCIES:

Set - "Water, Air and Heat" Titles (1) Is Water in your Body?
(2) What makes Water Evaporate?

BOOKS AND BOOKLETS:

(1) Mallinson, George G.; Mallinson, Jacqueline B.; Ellwood, Esther P.; Silva, Lorraine Z. Science Understanding Your Environment. Morristown, New Jersey: Silver Burdett Co. 1972.

(2) Fishchler, Abraham S.; Lawery, Lawrence F. and Blanc, Sam S. Science A Modern Approach. New York: Holt, Rinehart and Winston, Inc. 1966.

(3) Frugis, Sergio. Disney's Wonderful World of Knowledge Vol.2 p. 21. Danbury Press, 1971.

EECD

TEACHER MATERIAL EVALUATION

UNIT____ GRADE______ ITEM EVALUATED__________________

1. Were the number of activities sufficient? __________________

   ____

2. Was all required material readily available?________________

   ____

3. Did the material lend itself to correlation with your usual science curriculum?________________________________

   ____

4. Did the number of students in the class(es) affect the manner in which materials were used?__________________________

   ____

5. Did the students comment on the materials?______________

   ____

   Students' comments:______________________________________

   ____

   ____

   ____

6. Did the materials fit the ability of the students?__________

   ____

7. Did you use other resources of materials?________________

   ____

   What were they?____

EVALUATOR______________________

TEACHER ACTIVITIES EVALUATION FORM

GRADE________ UNIT EVALUATED____________________

CONCEPT NO.	ACTIVITY NO.	EVALUATION:			
		EXCELLENT	GOOD	FAIR	POOR

COMMENTS:

UNIT 5 NOISE

All sounds come from some kind of matter that moves. The movements of matter back and forth are called vibrations. There are many different sounds in the world. Some are pleasant. Some are unpleasant. Some sounds that are not pleasant are called noise. Too much noise for long periods of time or certain types of noise for even short periods of time can cause loss of hearing.

There are sounds all around us. There are also many kinds of sounds. Some sounds let us know what is going on. We can hear sounds on the playground, at the store, in the classroom and many other places.

Sounds can be produced by living or non-living things. Some birds make pleasant sounds. Animals use sounds for many different reasons. Some insects rub parts of their bodies together to make sounds. Others make sounds by rapidly vibrating their wings. Some animals make sounds that cannot be heard by man because they are outside the frequencies he can hear. But man can detect these sounds with various instruments he has devised. A school bell, a train whistle and an alarm clock are all non-living items that produce sounds. These non-living items may produce warnings or safety signals.

Sounds move from place to place. It moves through air. Sounds can travel through gases, liquids and solids. Almost all higher animals, including man receive sounds with their ears.

Sounds are also mainly used for communication. Different animals produce different sounds. Humans are also responsible for creating a variety of sounds.

Sounds are so different and they are made by so many different things in so many different ways.

CONCEPT #1:

Sounds are all around us.

OBJECTIVES:

#1. Using a tape recorder, the students will identify different sounds heard in the neighborhood.

#2. The student will identify living or non-living things that produce sound.

ACTIVITIES:

#1. Have children to look in magazines for pictures that "say" sound. Discuss pictures with them. Have children to describe sounds that cause them to feel unhappy, frightened, sad and happy.

#2. Use a tape recorder and tape different sounds throughout the neighborhood (playground, classroom, store, construction site). Play the recordings in class and let the students attempt to identify them.

#3. Give the students time to explore the room and locate anything that can produce a sound. They may operate the pencil sharpener, open a window, slide the desk, roll a pencil on the floor. Have some others to observe and see if they can feel the movements that produce the sound.

#4. Ask children to bring or draw pictures of living or non-living things that produce sounds.

CONCEPT #2:

Sounds travel through gases, liquids and solids.

OBJECTIVE:

#1. The student will perform experiments to discover if sound travels through gases, liquids and solids.

ACTIVITIES:

#1. Have children tap pennies or rocks on the table or on one end of a yardstick. Have someone put his ear against a table or yardstick and describe what he hears.

#2. Have the student to place an alarm clock under a cardboard box. Then ask if the clock can be heard ticking throughout the room.

#3. The teacher will do a demonstration to answer the question: "Does sound Travel Best through Air, wood or iron?" (See worksheet)

#4. Place a bell in a jar of water. Ring the bell and ask the students if they can hear the sound of the bell through the water. Does sound travel through liquids?

#5. Show film: Sound and How It Travels. 11 min. B & W

#6. After viewing the film ask the students:

a. What is sound?

b. What causes sounds?

c. What must sound travel through to be heard?

STUDENT WORKSHEET

TO ACCOMPANY: CONCEPT #2 ACTIVITY #3

NOISE

TASK:

Does sound travel best through air, wood, or iron?

MATERIALS:

wristwatch

yardstick

iron bor (2 to 3 ft. long)

PROCEDURE:

#1. Put the watch on a table. Stand 3 feet away. Listen for the ticking.

#2. Have a friend hold the watch to one end of a yardstick. Hold the other end to your ear.

#3. Carefully hold one end of the iron bar to your ear. Have a friend hold the watch to the other end of the bar.

QUESTIONS:

#1. Can you hear the watch ticking while it is on the table? How does the sound travel?

#2. Can you hear the watch ticking through the yardstick? How does sound travel? Is it louder or softer than before?

#3. Can you hear the watch ticking through the iron bar? How does sound reach your ears? Is the ticking louder or softer than when the watch was on the table?

#4. Does sound travel best through air, wood, or iron?

CONCEPT #3:

Sound is used mainly for communication.

OBJECTIVES:

#1. The student will imitate sounds produced by familiar animals.

#2. The student will demonstrate a variety of sounds produced by humans.

ACTIVITIES:

#1. Ask students to imitate animal sounds they have heard. Discuss how each animal produces the sound it makes. Have children to draw or bring in pictures of the animals they imitated.

#2. Let students demonstrate many of the sounds human beings produce-laughing, singing, whispering, whistling, humming, fingersnapping, and blowing through instruments.

#3. Secure a tape recorder and let the students record their voices. Then let volunteers recite the alphabet under different conditions-without opening the mouth, without allowing the tongue to touch the cheek or while holding the nose.

CONCEPT #4:

We can hear many different sounds.

OBJECTIVES:

#1. The student will be able to identify 5 instruments with their eyes closed with no more than 1 error.

#2. The student will be able to explain the difference in sounds, achieving a satisfactory rating by the teacher.

#3. The student will be able to describe loud and shrill noises, achieving a satisfactory rating by the teacher.

#4. The student will be able to describe some unpleasant sounds.

#5. The student will report orally the sounds heard in bed after dark, achieving a satisfactory rating by the teacher.

#6. The student will construct a scrapbook achieving a satisfactory rating by the teacher.

#7. The student will discuss how sounds are alike and how sounds are different achieving a satisfactory rating by the teacher.

ACTIVITIES:

#1. Let the students bring musical instruments and toys to class. Have the students to use the musical instruments and toys to demonstrate loudness and pitch. Then have the students to feel the instruments to determine what makes them produce sound.

#2. The teacher will tap on a table, the students will cover and uncover their ears. Next, have the students cup their hands behind their ears or roll a paper, to direct the sound into their ears. Have someone put his ear upon the table that is being tapped. Then ask the student to explain the difference in the sound.

#3. Let 5 students make sounds with five instruments and let the other students close their eyes and listen to these sounds. Then have the students to name the instruments.

#4. Using a yardstick held firmly at the edge of the desk, pluck the free end gently and then firmly. Discuss how some sounds are alike but vary in loudness, and how some sounds are entirely different.

#5. Have the students describe loud or shrill noises they have heard.

#6. Have the students describe their own experiences with unpleasant sounds.

#7. Let the students notice and report orally the sounds they could hear while in bed after dark.

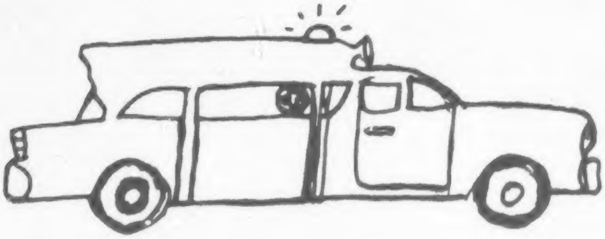
#8. Let the students make a scrapbook of pictures of different objects which produce sound.

#9. Let the students describe or imitate the type of sound things in the picture would produce. (See student sheet)

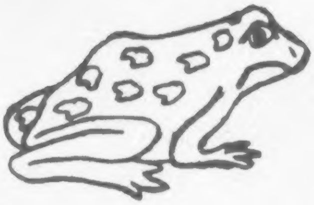
STUDENT SHEET

TO ACCOMPANY: CONCEPT #4 ACTIVITY #9

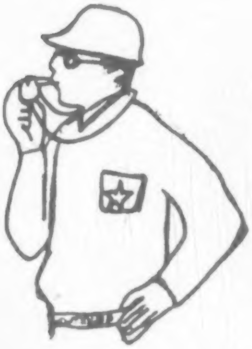
①

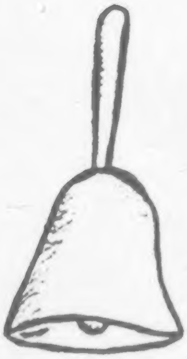


②

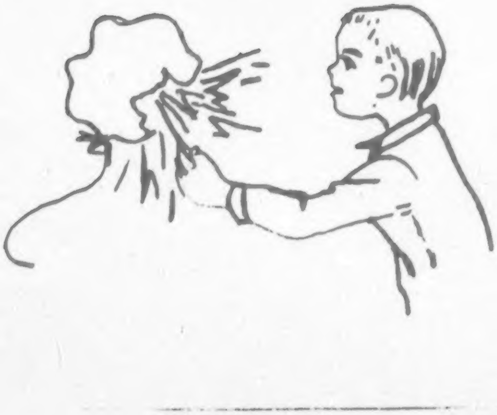


③





⑤



DISCUSSION QUESTIONS

1. What are some things in your room that can produce a sound?
2. Describe sounds that cause you to feel unhappy or frightened.
3. Name some living and non-living things that produce sounds.
4. What are some sounds that are common to your neighborhood?
5. Does sound travel best through air, wood or iron?
6. Can sound travel through water?
7. Name some sounds that humans produce.

VOCABULARY

EXPLORE

SOUND

NOISE

PRODUCE

IMITATE

RESOURCE MATERIALS

BOOKS:

Brandwein, Cooper, Blackwood, Hone, Fraser, Concepts in Sceince 3. Harxourt Brace Jovanovich, Inc. Dallas, Texas. 1972.

Mallinson, George; Mallinson, Jacqueline; Feravolo, Rocco. Understnading Your Environment Book 3: Silver Burdett Co., Morristown, New Jersey. 1972.

Mallinson, George and Jacqueline, Ellwood, Esther, Silva, Lorraine Z. Understanding Your Environment, Book 1, Silver Burdett C., Morristown, New Jersey. 1972.

Schneider, Herman and Nina, Science Far and Near, Book 3 D.C. Heath and Co. Boston 1961.

PAMPHLETS:

Noise and You, United States Environmental Protection Agency. 1970.

FILM:

Sound and How It Travels (11 min. b & w. St. Martin Parish Instructional Center.

EECD

TEACHER MATERIAL EVALUATION

UNIT____ GRADE______ ITEM EVALUATED___________________

1. Were the number of activities sufficient? ____________________

____

2. Was all required material readily available?__________________

____

3. Did the material lend itself to correlation with your usual science curriculum?____

____

4. Did the number of students in the class(es) affect the manner in which materials were used?________________________________

____

5. Did the students comment on the materials?____________________

____

Students' comments:____

____

____

____

6. Did the materials fit the ability of the students?____________

____

7. Did you use other resources of materials?_____________________

____

What were they?____

EVALUATOR____________________

TEACHER ACTIVITIES EVALUATION FORM

GRADE________ UNIT EVALUATED__________________

CONCEPT NO.	ACTIVITY NO.	EVALUATION:			
		EXCELLENT	GOOD	FAIR	POOR

COMMENTS:

UNIT 6 WILDLIFE

Wildlife can be thought of as any plant or animal living in the natural state; untamed as in animals and not cultivated as in plants. Some examples of wild animals are lions, rabbits, deer, snakes and birds. Some example of wild plants are dandelions, milkweed, cocklebur, acorn and others. Many of our wild animals differ greatly in body covering. Some animals have hard shell covering, others have feathers, and other animals have scales, and still other animals are covered with hair or fur.

Some examples of animals with hard shell covering are scallop, clam, and snail. An example of animals with feathers are the different kinds of birds. Other animals with scales are the different types of fish, and some examples of animals with hair or fur are rabbits, beavers, squirrels and raccoons.

Our wildlife animals eat plants and others eat animals and still others eat plants and animals. Some animals which eat only plants are rabbits, squirrels and beavers. Animals which eat only animals are lions, leopards, and bears. All the animals mouth and teeth are shaped in a certain way for the animals to get food.

Animals also differs in size and shape. Some animals are little where as some are big. These are just some of the differences we find in our wild animals.

CONCEPT #1:

Animals differ greatly in body covering.

OBJECTIVES:

#1. The students will identify the body covering of different animals with no more than two errors.

#2 The students will observe the body covering of different animals in the school's neighborhood achieving a satisfactory rating by the teacher.

#3. After a 20 minute observation on a field trip around the school neighborhood, the student will be able to discuss the different body covering, achieving a satisfactory rating by the teacher.

#4. Shown pictures of different animals, the student will identify the body covering by setting the pictures under the correct grouping, achieving a satisfactory rating by the teacher.

ACTIVITIES:

#1. The teacher will pass out a sheet with pictures of different animals. Then the teacher will tell the students to look at each animal body covering. Next make sure the students know what is meant by body covering by asking (what do you use to cover your body?) After the students arrive at the answer of clothing have the students to do the following:

1. Mark an X over the animals which have hair or fur covering.

2. Circle the animals which have feathers.

3. Draw a line over the animal which have a hard shell covering. (See student worksheet)

#2. Give each student a sheet with pictures of different animals. Then call on different students to tell what type of body covering each has. (Example - rabbit hair or fur) See student worksheet.

#3. Take the students on a field trip around the school neighborhood to observe for 20 minutes the different kinds of animals covering. After returning to the classroom have the students to tell the different body covering observed, the teacher will list them on the board.

#4. The teacher will write on the bulletin board:

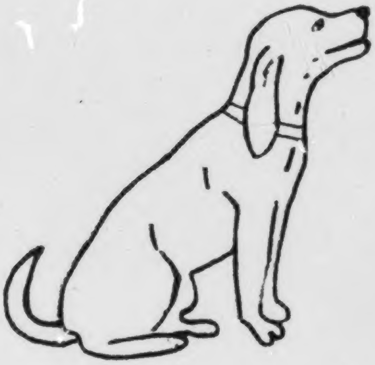
animal with hair or fur

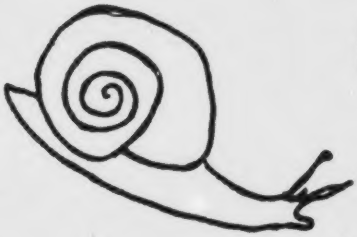
animal with hard shell
animal with feathers
animal with scale
animal with bare skin

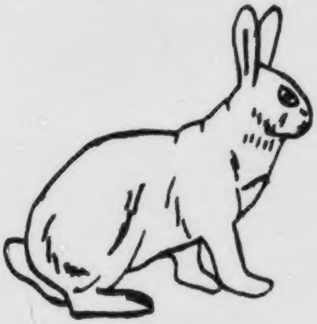
Then the teacher will show the students different animal pictures and call on different students to go to the bulletin board and put the picture in the correct group.

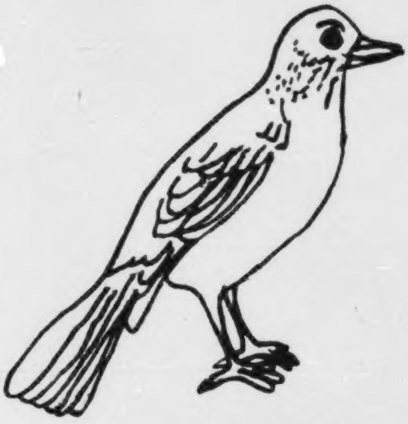
STUDENT WORKSHEET

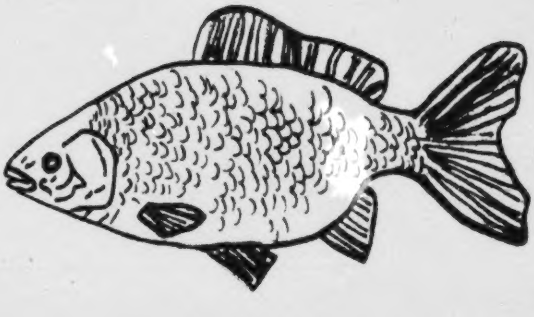
TO ACCOMPANY: CONCEPT #1 ACTIVITY #1

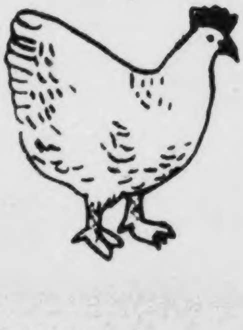


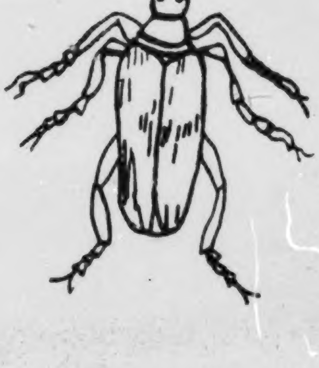






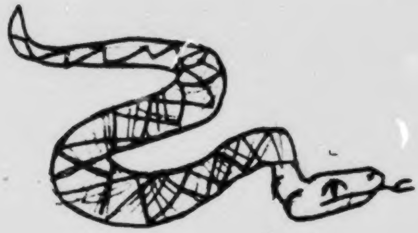


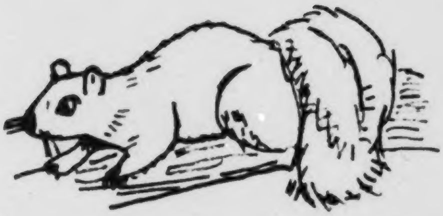


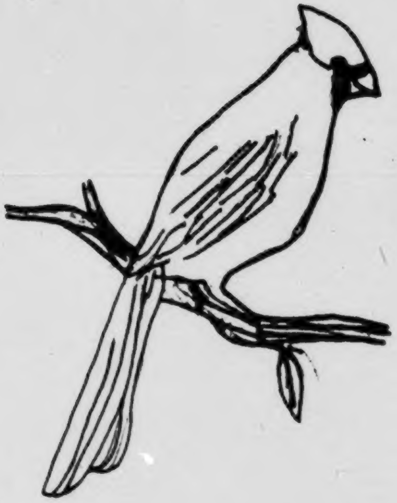


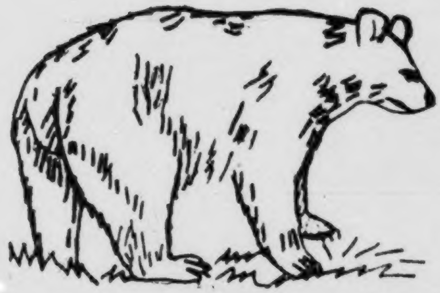
STUDENT WORKSHEET

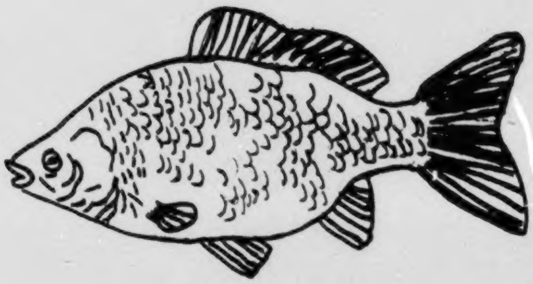
TO ACCOMPANY: CONCEPT #1 ACTIVITY #2

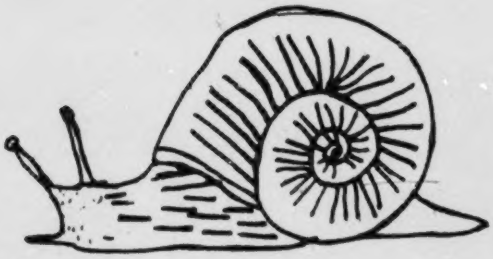












CONCEPT #2:

Plants give animals food, shelter, and clothes.

OBJECTIVES:

#1. Given a sheet with different pictures, the student will tell if the picture is showing plants giving food, shelter, or clothing, with 80 percent accuracy.

#2. Given a worksheet, the student will tell ways plants give animals shelter acheiving a satisfactory rating by the teacher.

#3. By looking at different pictures, the student will explain orally how all animals eat plants, acheiving a satisfactory rating by the teacher.

ACTIVITIES:

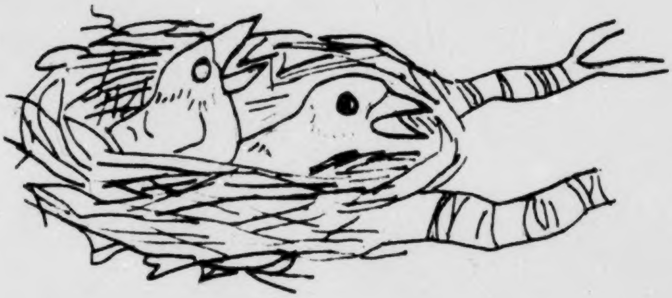
#1. Give the students a worksheet. Then have the students to tell whether each picture is showing plants giving food, shelter, or clothing. (See student worksheet)

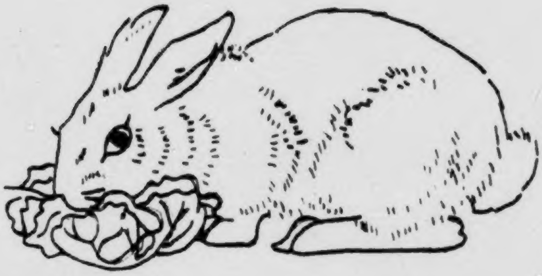
#2. Give the students a worksheet. Then have the students to tell ways plants give animals shelter by looking at the drawing. (See student worksheet)

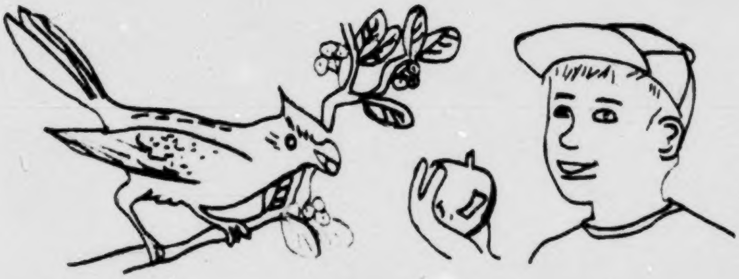
#3. Give the students a worksheet. Then have the students explain how all animals eat plants by looking at the drawing. (See student worksheet)

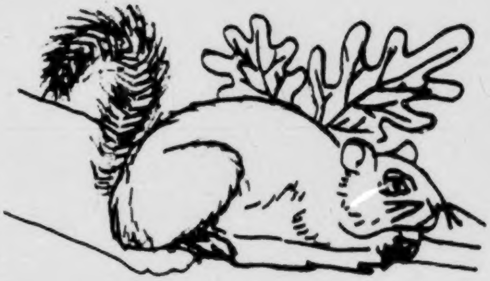
STUDENT WORKSHEET

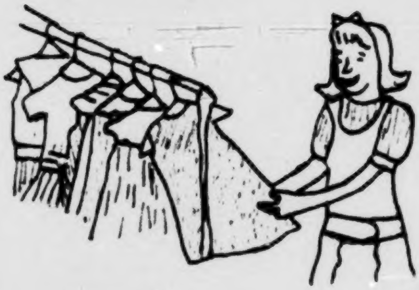
TO ACCOMPANY: CONCEPT #2 ACTIVITY #2

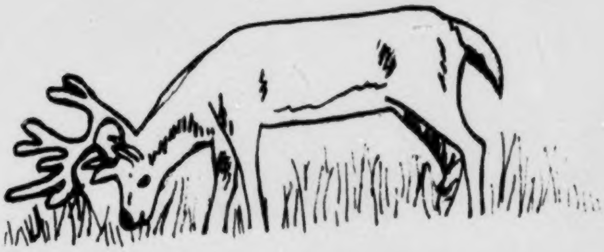






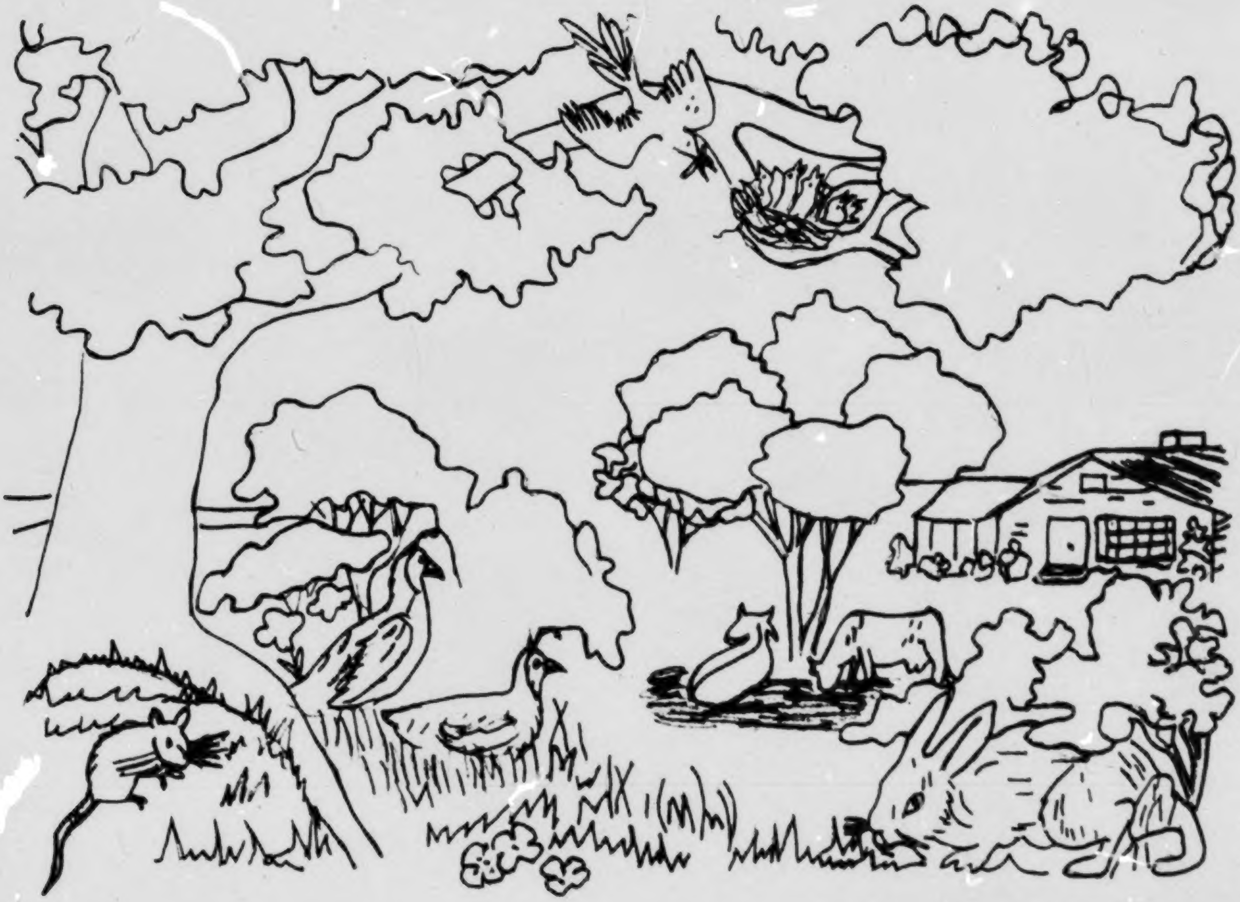






STUDENT WORKSHEET

TO ACCOMPANY: CONCEPT #2 ACTIVITY #2



CONCEPT #3:

Animals have specialized body structures that are adapted for food getting.

OBJECTIVES:

#1. The student will be able to briefly tell how their favorite animals get food, achieving a satisfactory rating by the teacher.

#2. Given a group of pictures, the student will be able to sort and compare pictures of animals with respect to similarities and differences in food getting and eating habits.

#3. The student will be able to draw the specialized body structure which birds and mammals use for getting food, achieving a satisfactory rating by the teacher.

#4. The student will be able to locate pictures of wildlife animals' teeth and discuss how they differ, achieving a satisfactory rating by the teacher.

#5. The student will be able to demonstrate how different animals eat, achieving a satisfactory rating by the teacher.

#6. The student will be able to construct a booklet to show how animals use their teeth, achieving a satisfactory rating by the teacher.

ACTIVITIES:

#1. Let each student tell a brief description of one of their favorite animals. An example is an animal with a lower bill which form a pouch to help it catch and hold fish (Pelican). Then let the students draw the mystery animal the student is describing.

#2. Show the students different pictures (such as: a shark, gull, rabbit, hamster and a wolf) then let the students tell how the animals are similar. Next let the students find pictures of other animals that fit each category. Display the remaining unclassified pictures around the room and ask for suggestions about how they may be grouped to show which ones obtain food in similar ways.

#3. Invite a resource person from a natural history museum, or a zoo to speak to the class about the specialized body structures different animals have for getting food. After the speaker is finish let the students ask questions.

#4. Let the students select a "wildlife site, and observe for one day. Draw the specealized body structure which birds and mammals use for getting food.

#5. Let the students collect pictures of teeth of wildlife animals (include pictures of teeth of a rabbit, bear, lion, squirrel) and discuss how they differ.

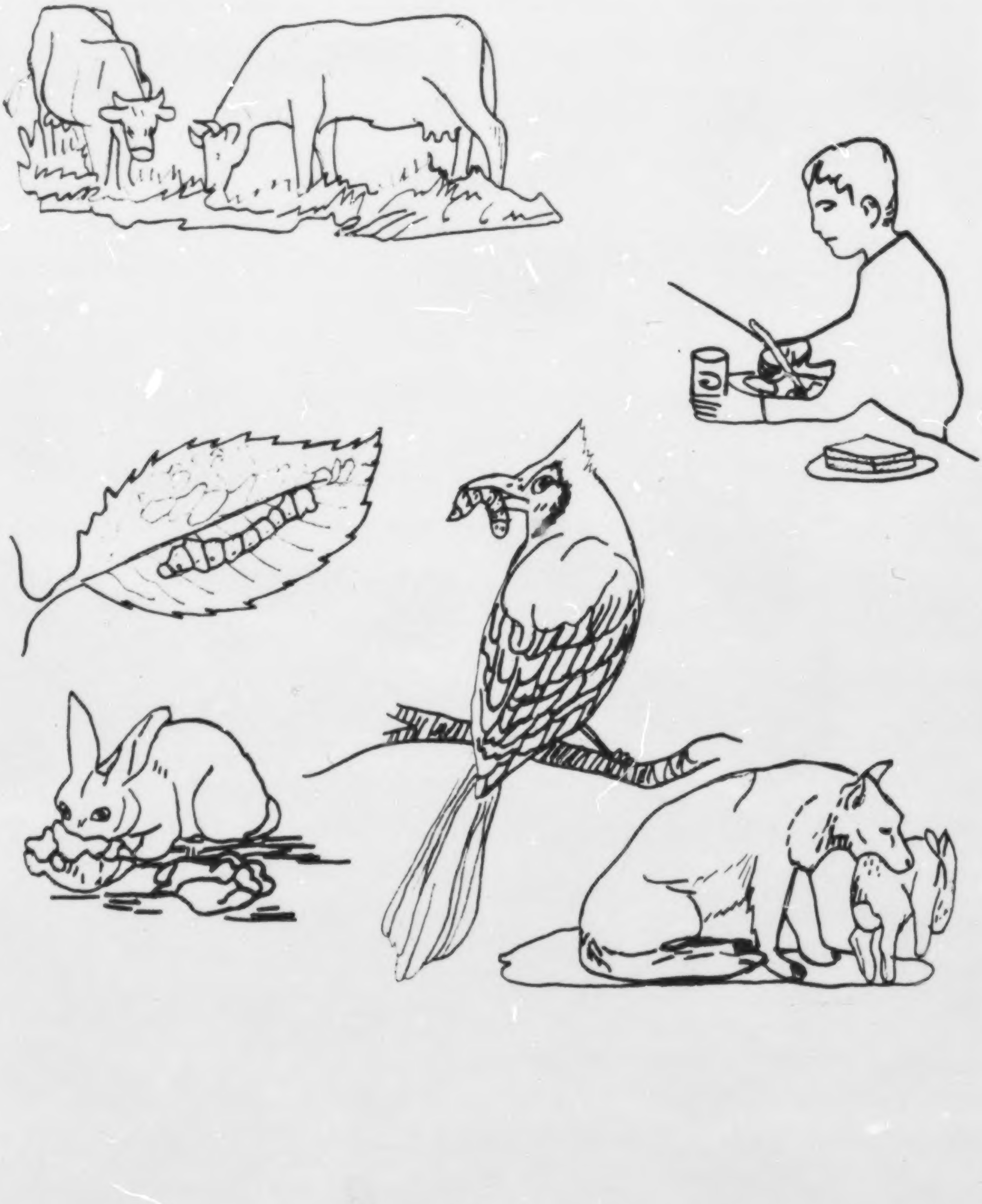
#6. After teacher and students have discussed the specialize structure which enables the animal to get food have the students to draw the structure under each animal on the worksheet.

#7. Let the students watch how animals (such as a dog, cat, bird, fish) eats. Play a game in which a student imitates how an animal eat. See if the class can guess what animal it is.

#8. Let the students make a booklet to show how animals use their teeth.

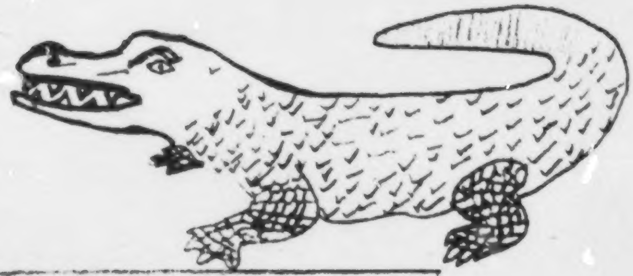
STUDENT WORKSHEET

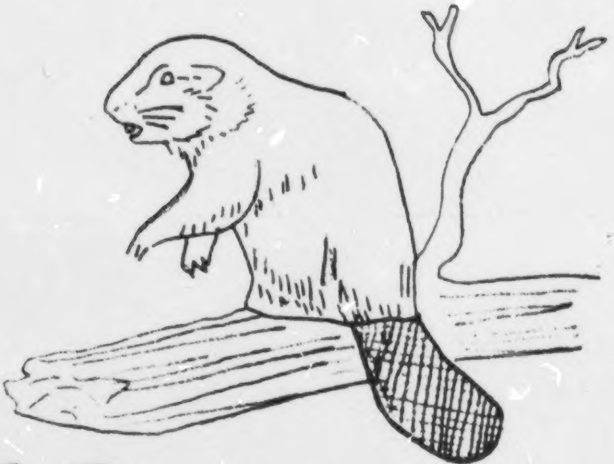
TO ACCOMPANY: CONCEPT #3 ACTIVITY #7

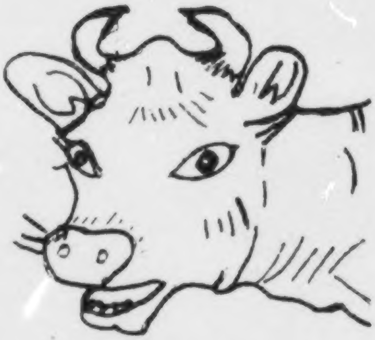


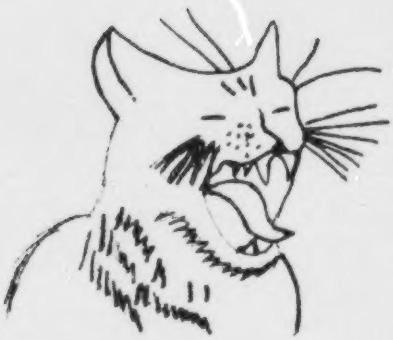
STUDENT WORKSHEET

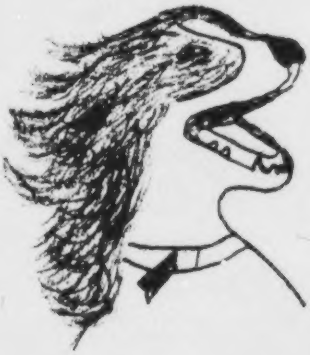
TO ACCOMPANY: CONCEPT #3 ACTIVITY #7

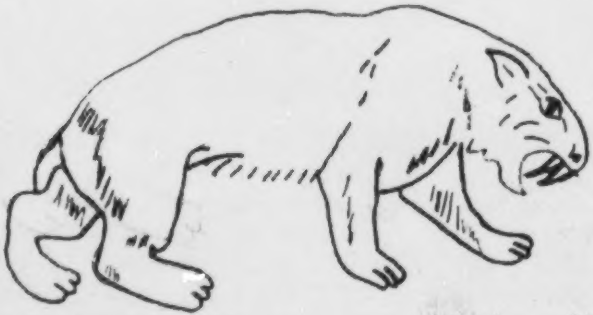












CONCEPT #4:

Some animals eat plants and others eat animals and still others eat plants and animals.

OBJECTIVES:

#1. The student will be able to select animals which eat plants with no more than 2 errors.

#2. The student will be able to tell the kind of food that four animals eat with no more than 1 error.

#3. The student will be able to identify the kind of food 5 animals eat, with 80% accuracy.

#4. The student will be able to tell if 9 animals eat plants or animals with no more than 3 errors.

ACTIVITIES:

#1. Let the students look at the animals on the student worksheet. Have the students to draw one line under each animal that eats plants. Then draw lines under each animal that eats other animals. (See student worksheet)

#2. Let the students look at a student worksheet. Then have the students to draw a line from the animal to the food it can eat. Next have the students to look at the mouth structure of each animal. From this lead the children to make inferences as to the kinds of foods these animals eat. Then discuss answers.

#3. Let the students look at a student worksheet. Then have the students to circle the animals which eat only plants, and discuss the answers.

#4. Give the students a worksheet. Then have the students to look at each animal. Have the students to look at the two other pictures in each row and decide what the animal eat. After the student decide they should circle the answer or mark an X over the correct picture. Then discuss the answers.

#5. Begin this lesson soon after the student have eaten breakfast, or lunch. Then ask them what foods did they eat and discuss whether these foods were plant or animal. If possible, extend the discussion by having the students think about the foods eaten by their pet or animals in the community or classroom. Then have the students to look at the illustration and ask the following questions:

1. What food is being eaten by the worm in the first picture?

2. Is it a plant or animal?

3. What food is being eaten by the chicken?

4. Is it a plant or animal?

5. What foods are being eaten by the man?

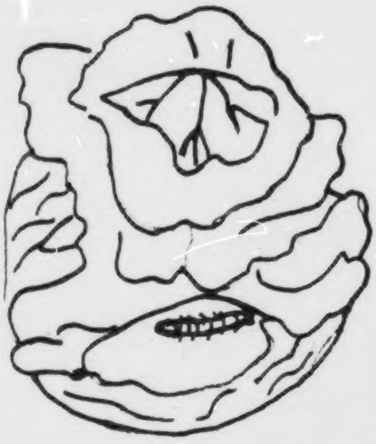
6. Is it plant or animal or both plant and animal?

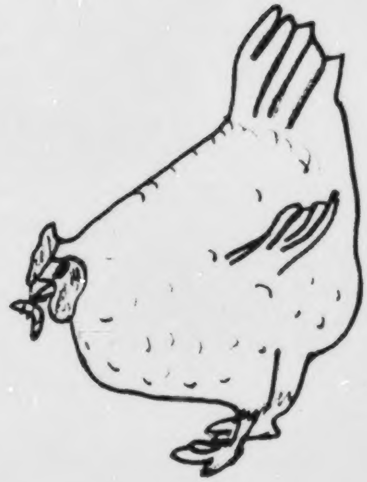
#6. Write on the bulletin board plant-eaters, meat-eaters, and animals that eat both plants and animals. Then show pictures of animals which are familiar to the students, call on different students to place the animal in the correct group. After the students have placed all the pictures ask the students in which group would they place themselves?

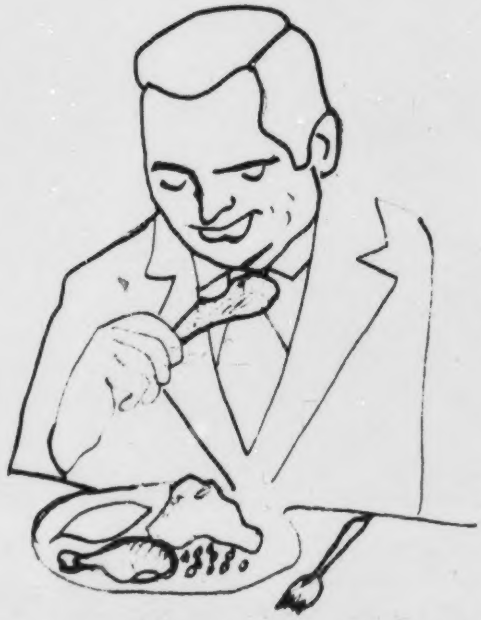
#7. Read the students different stories about the foods different animals eat. Then discuss story.

#8. Let the students draw three pictures of animals which eat plants and put a circle around the animals. Then draw two animals which eat animals and put a square around the animals.

ILLUSTRATION FOR ACTIVITY #5

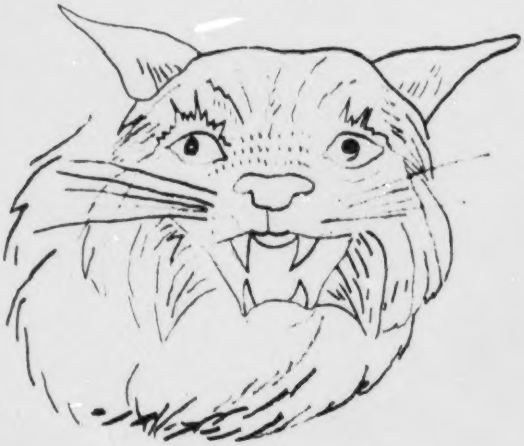


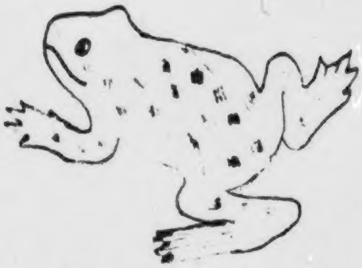


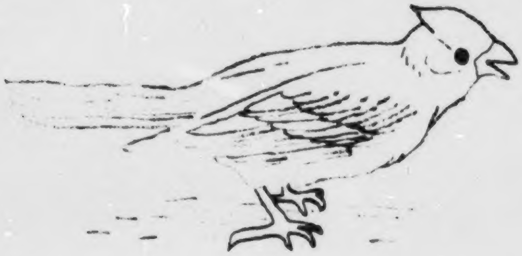


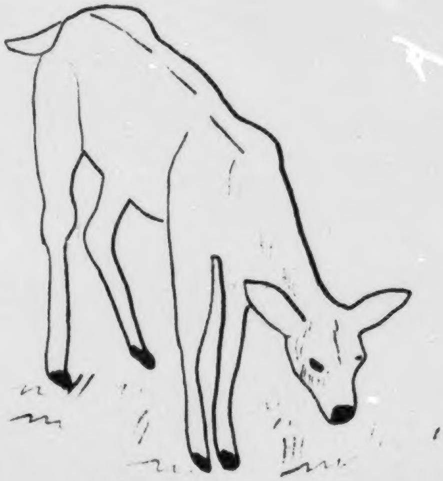
STUDENT WORKSHEET

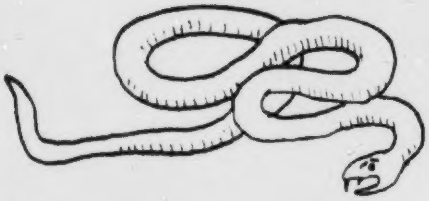
TO ACCOMPANY: CONCEPT #4 ACTIVITY #1

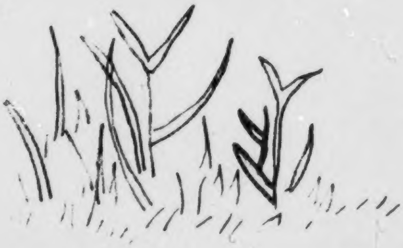


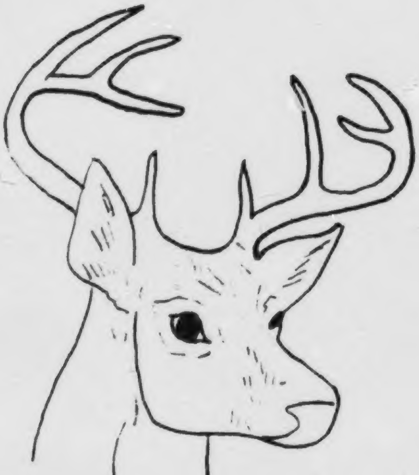


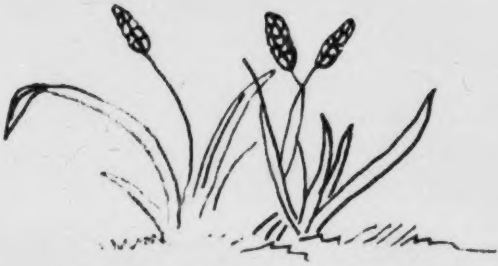






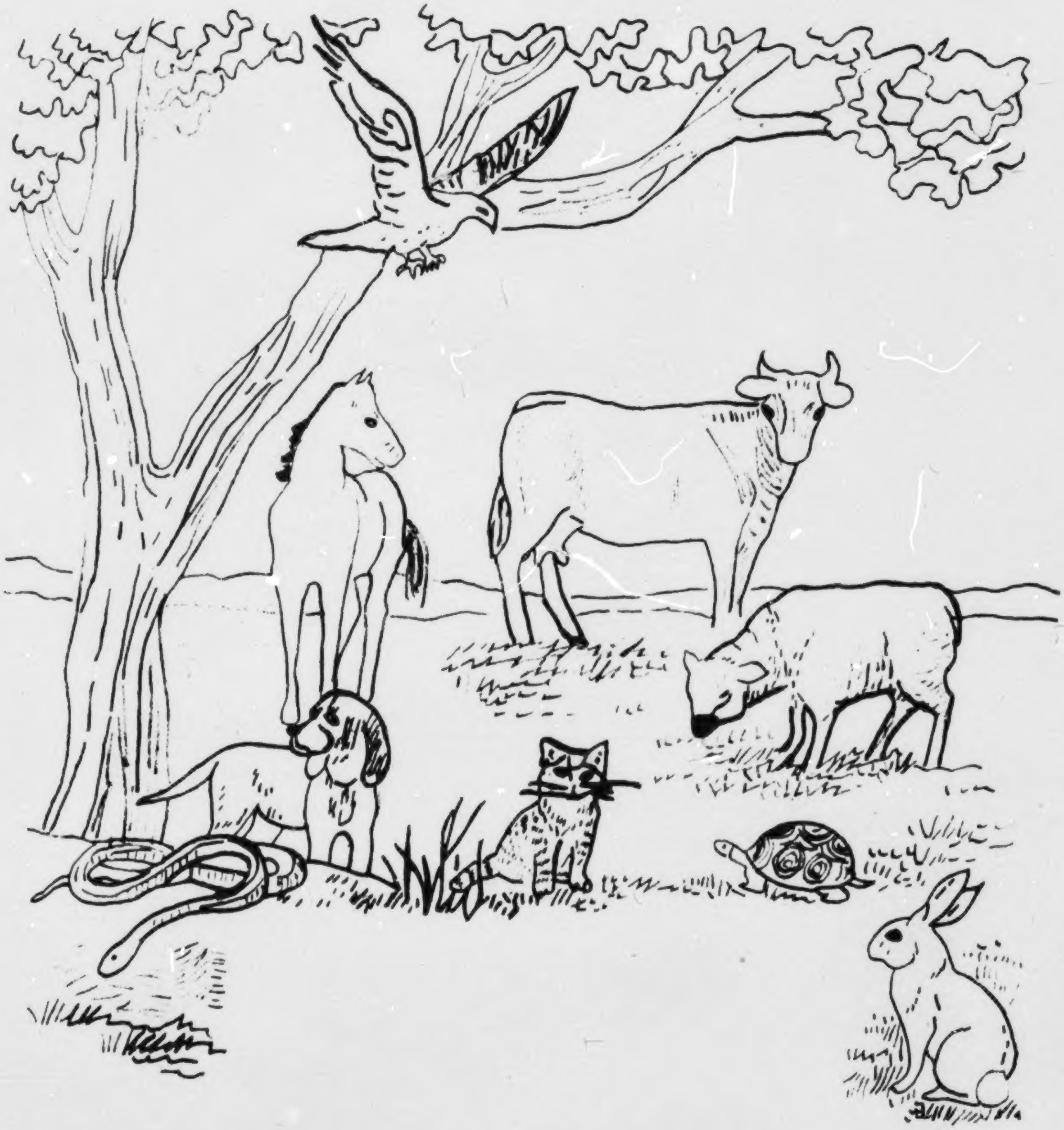






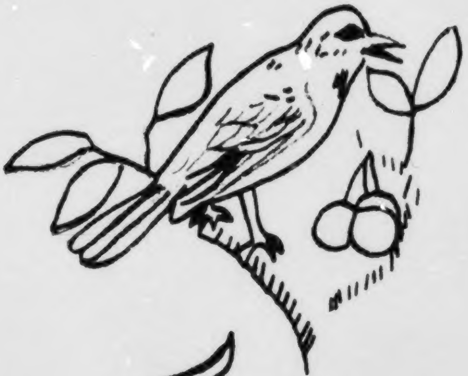
STUDENT WORKSHEET

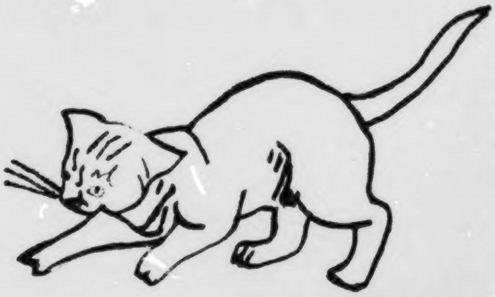
TO ACCOMPANY: CONCEPT #4 ACTIVITY #2

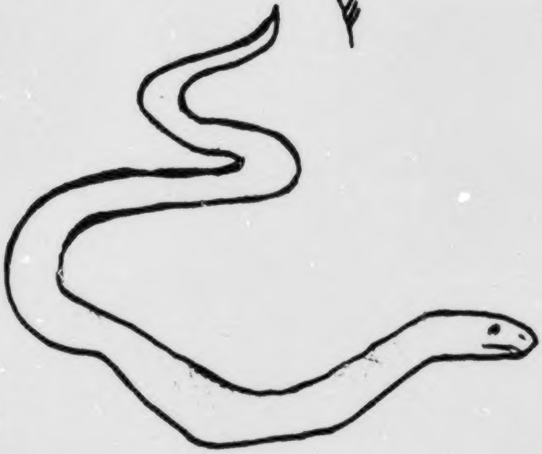


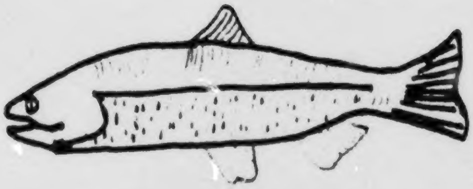
STUDENT WORKSHEET

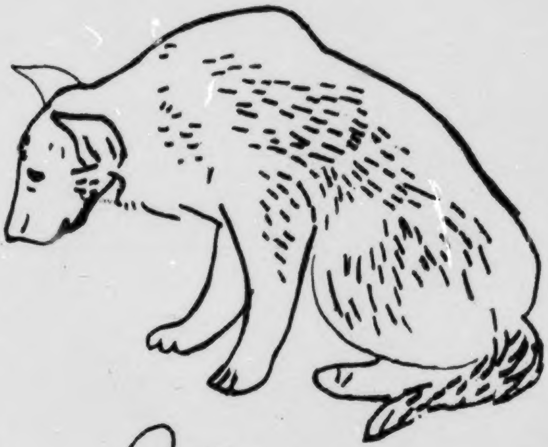
TO ACCOMPANY: CONCEPT #4 ACTIVITY #3

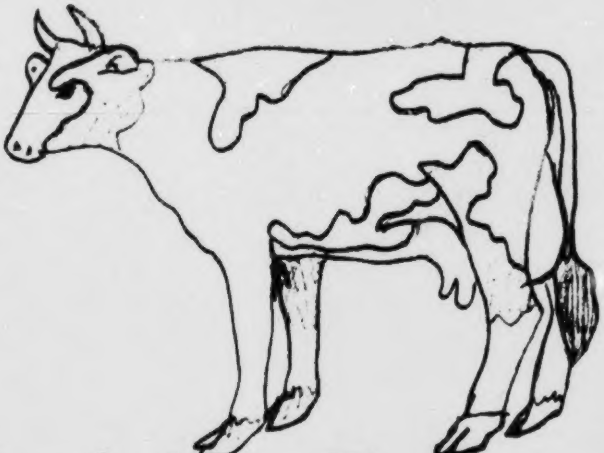


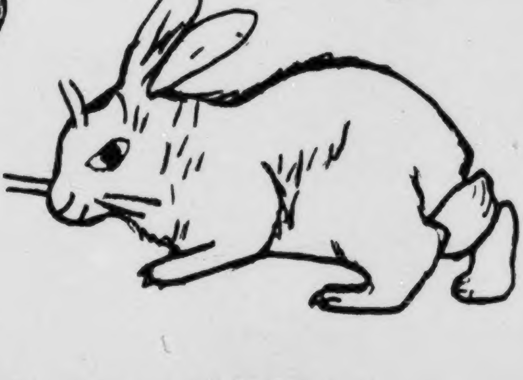


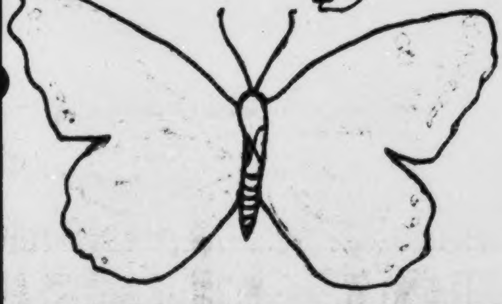






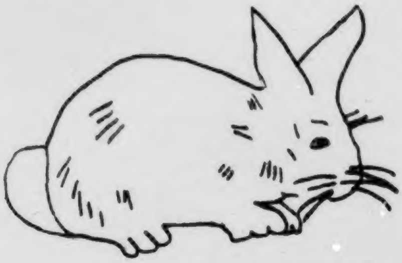


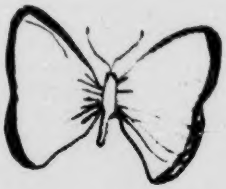


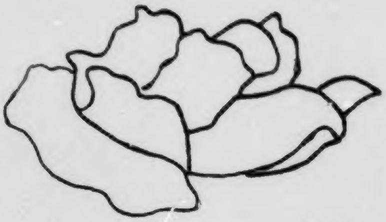


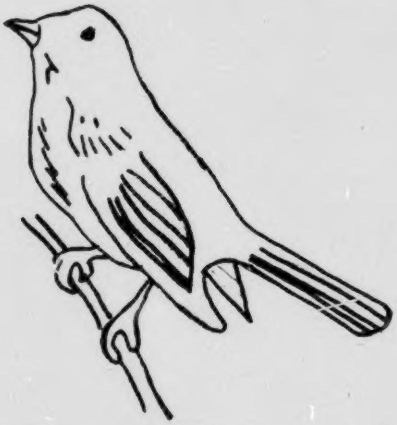
STUDENT WORKSHEET

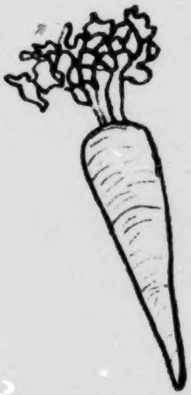
TO ACCOMPANY: CONCEPT #4 ACTIVITY #4

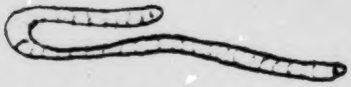


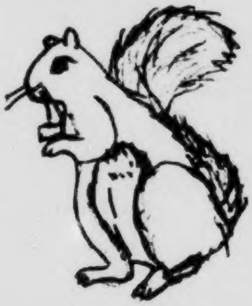


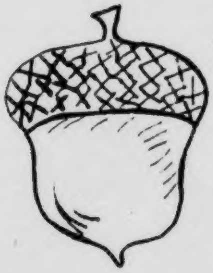


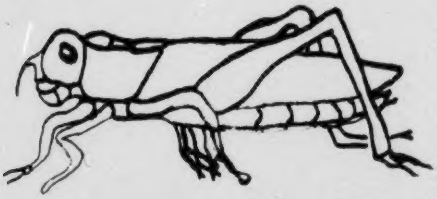


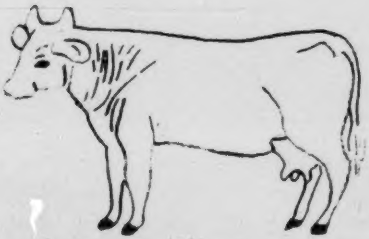


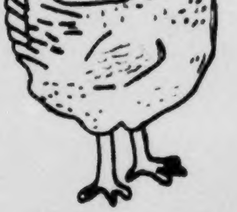


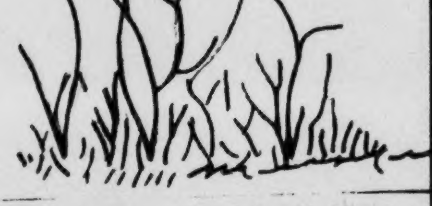












CONCEPT #5:

Animals differ in size and shape.

OBJECTIVES:

#1. The student will be able to identify animals as being big or little, achieving a satisfactory rating by the teacher.

#2. Shown 9 pictures of animals, the student will discuss the likeness and differences and then arrange the pictures in groups, achieving a satisfactory rating by the teacher.

#3. The student will be able to construct a scrapbook of small and large animals, achieving a satisfactory rating by the teacher.

#4. With the aid of a worksheet, the student will be able to answer questions asked by the teacher, achieving a satisfactory rating by the teacher.

#5. From memory, the student will be able to draw a rabbit and a cow and identify which is the smallest animal, to the best of his ability, as judged by the teacher.

#6. The student will be able to describe animals according to size and shape, achieving a satisfactory rating by the teacher.

#7. Given a worksheet, the student will be able to identify all the smallest animals on the worksheet, getting 3 out of 4 correct.

ACTIVITIES:

#1. On the chalkboard write same and different. Let the students study the 9 pictures of living things. Think of ways in which some of them are alike and in some ways they are different. Then the teacher will call on different students to respond.

#2. Cut out a variety of animal pictures and mount them on sturdy cardboard. Select a picture of a middle-sized animal, perhaps a large dog-place it in the chalkledge. Write big and little on the opposite sides of the picture. Ask students to place the remaining animal pictures on the chalkledge below the correct word. Than ask students to help you rearrange the pictures to show the animals from smallest to largest.

#3. Have the students to make a scrapbook of animals. Cut animal pictures from magazines and newspapers. Then paste the pictures of all the smallest animals in one section of the book, and paste the pictures of all the largest animals in another section of the book. Keep adding to your animal scrapbook as you find more pictures of animals.

#4. Look at worksheet A, all these animals live on a farm.

1. How else are all these animals alike?
2. How are the animals different?
3. Circle the smallest animal.
4. Put an X over the largest animal.

#4. Look at worksheet B, all these animals are zoo animals.

1. How else are all these animals alike?
2. How are the animals different?
3. Color the smallest animal brown.
4. Color the largest animal black.

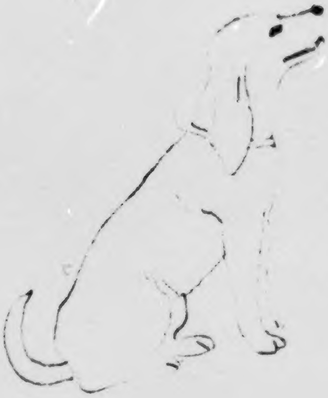
#5. Let the student draw a rabbit and a cow. Then circle the smallest animal.

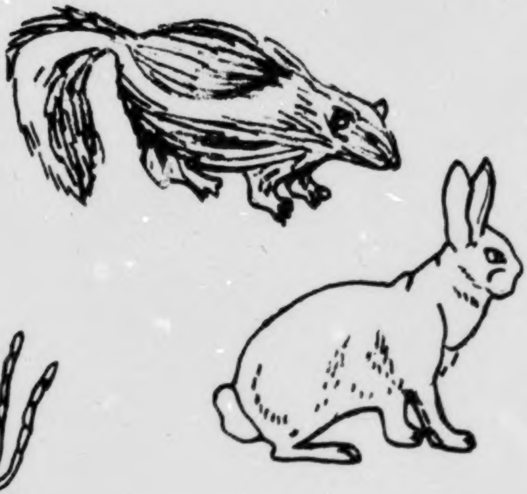
#6. Let the students play a guessing game. The teacher will begin the game by describing an animal according to the size and shape. The student which guesses the correct animal get a chance to describe an animal.

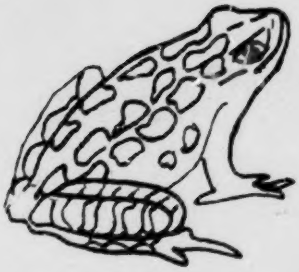
#7. Let the students circle all the smallest animals on the worksheet. Then discuss answers.

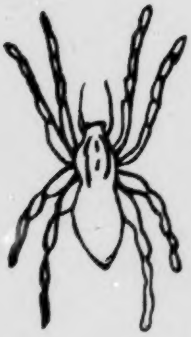
STUDENT WORKSHEET

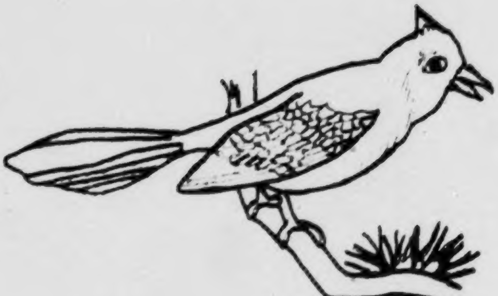
TO ACCOMPANY: CONCEPT #5 ACTIVITY #1

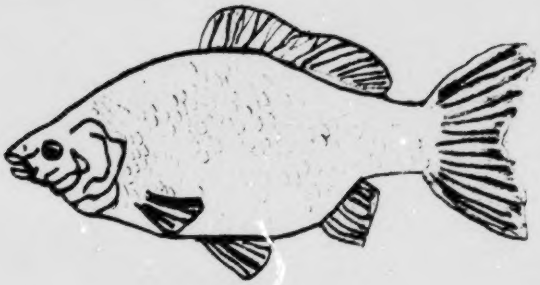


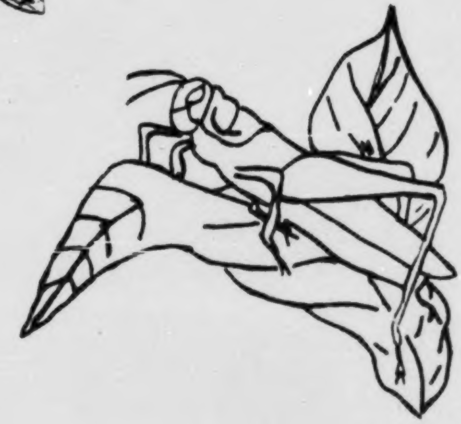


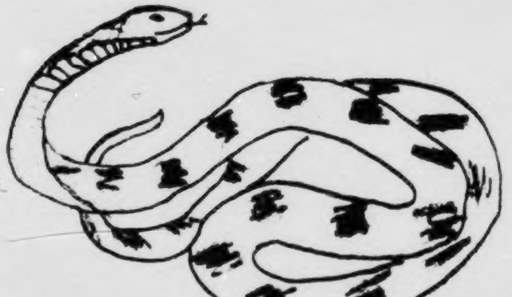






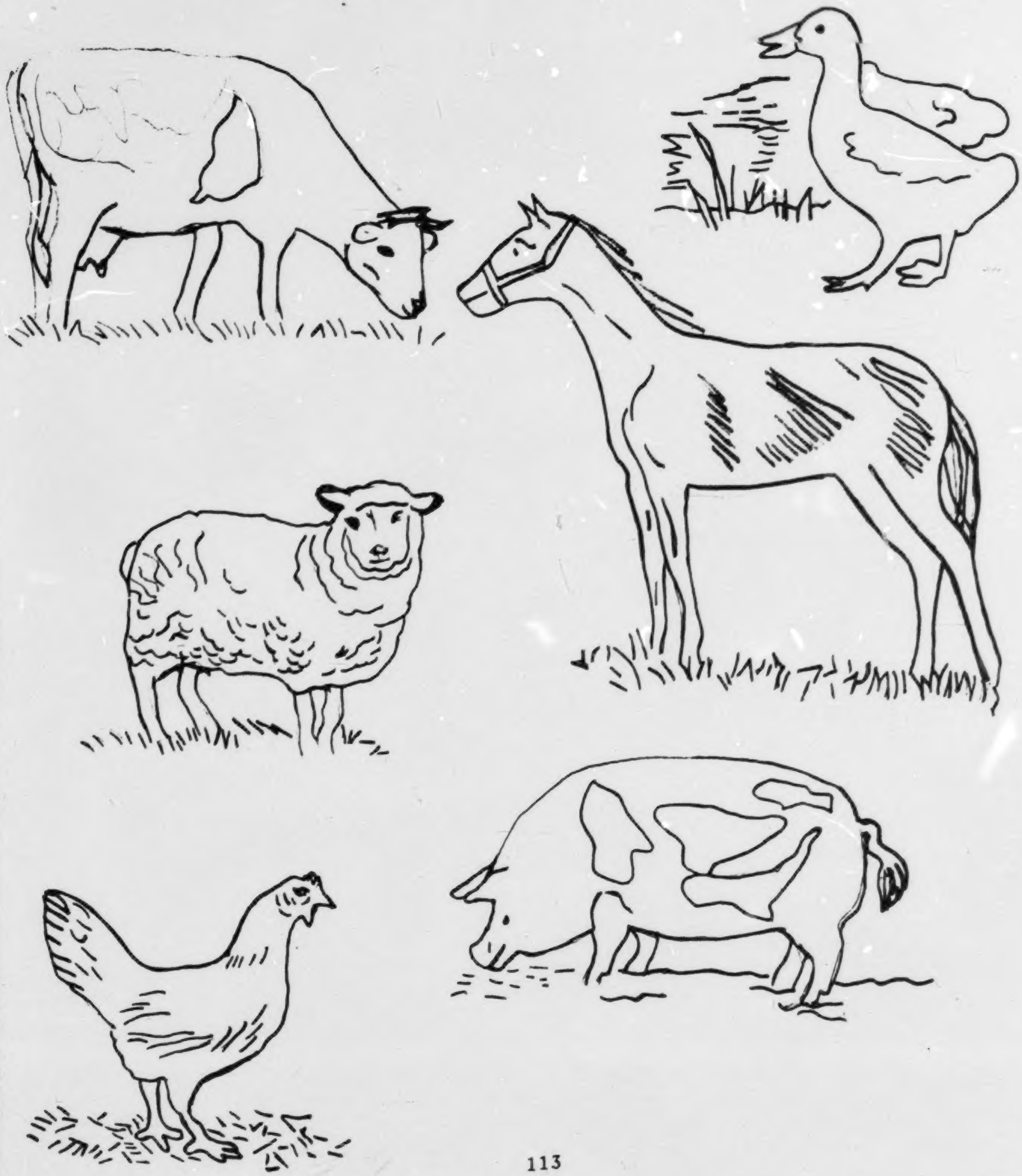






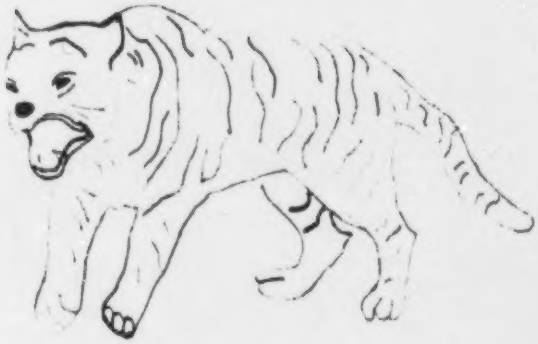
STUDENT WORKSHEET

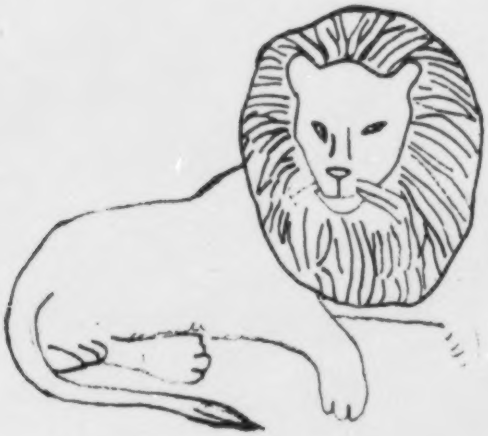
TO ACCOMPANY: CONCEPT #5 ACTIVITY #4

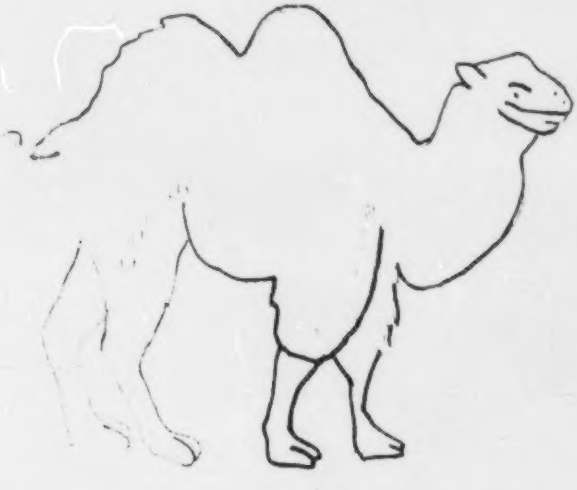


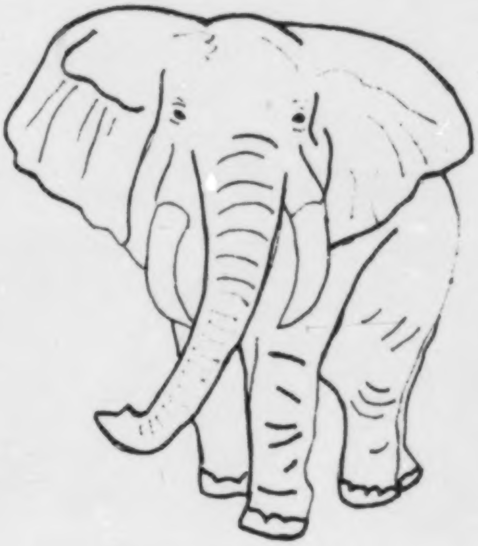
STUDENT WORKSHEET

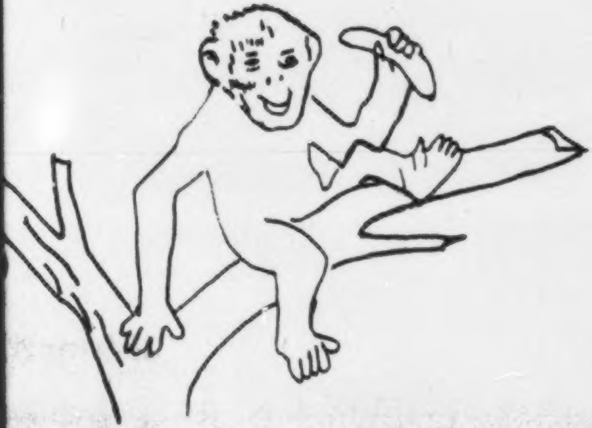
TO ACCOMPANY: CONCEPT #5 ACTIVITY #4

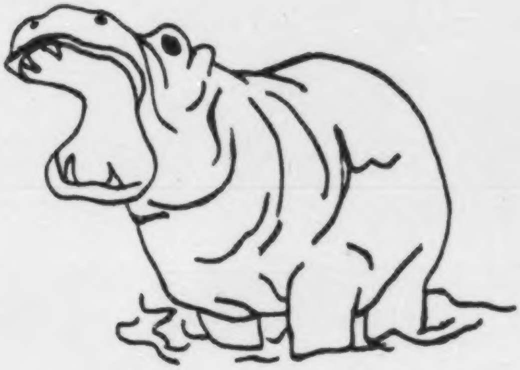








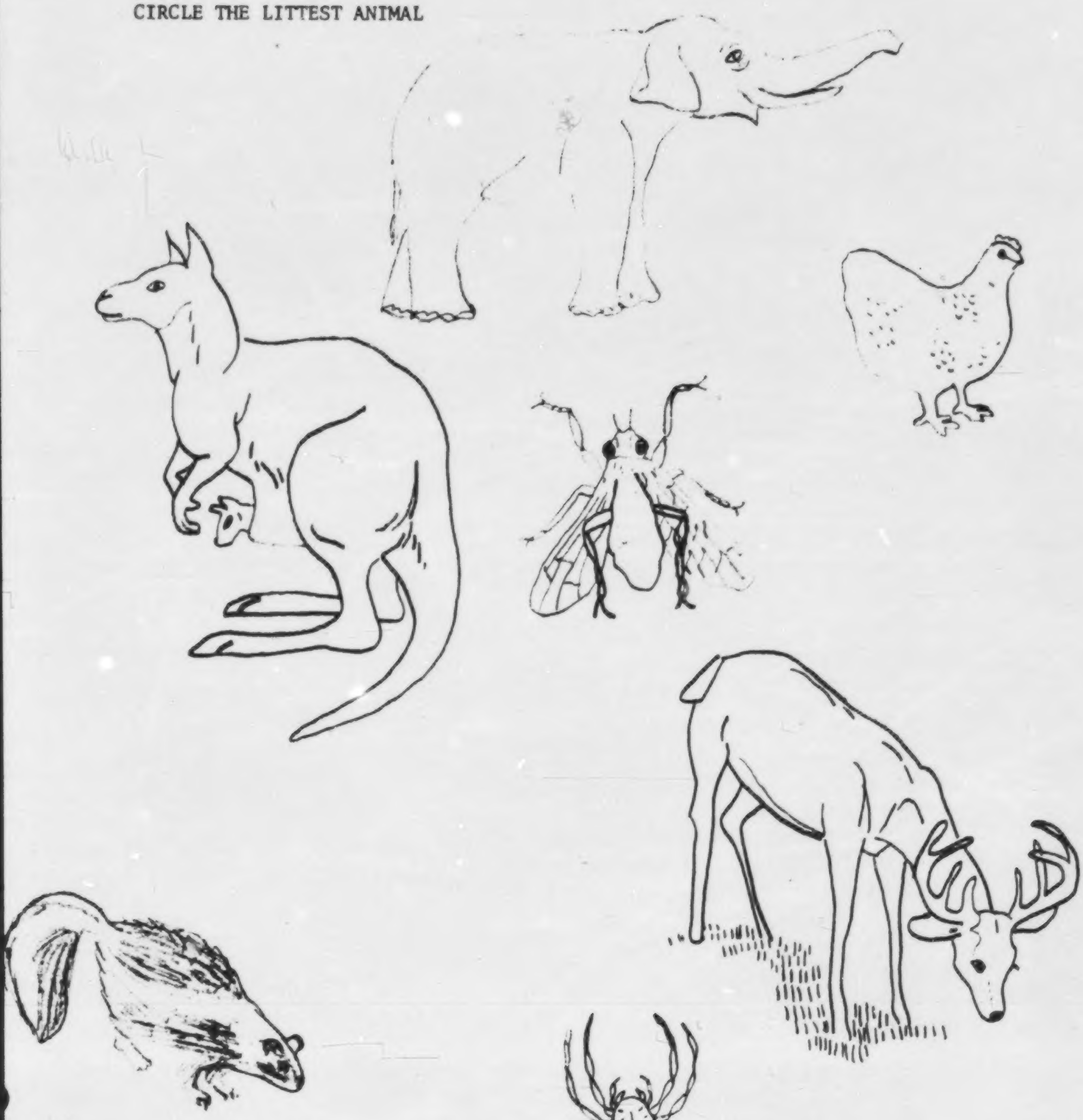




STUDENT WORKSHEET

TO ACCOMPANB: CONCEPT #5 ACTIVITY #7

CIRCLE THE LITTEST ANIMAL



DISCUSSION QUESTIONS

1. Name 4 animals which have fur or hair for body covering.
2. Name 2 animals which have feather covering.
3. Name 2 animals which have scale covering.
4. Name 2 animals which have a shell covering.
5. Give 2 examples to show how plants give animal shelter.
6. Name 2 animals which eat plants.
7. Name 2 animals which eat animals.
8. Name 2 animals which eat plants and animals.
9. Name 1 very small animal.
10. Name 2 very large animals.

RESOURCE MATERIALS

REFERENCES

(1) Elementary School Science, Verne N. Rockcastle, Frank R. Salamon, Victor E. Schmidt: Addison Wesley Publishing Co., Menlo Park, California, 1972

(2) Science For Work and Play, Herman Schneider, Nina Schneider: D.C. Heath and Co., Boston, 1968

(3) Science for Here and Now, Herman Schneider, Nina Schneider: D.C. Heath and Co., Boston, 1961

(4) Science Understanding Your Environment, George F. Mallinson, Jacqueline B. Mallinson, Ester P. Ellwood, Lorraine Z. Silva: Silver Burdett Co., Morristown, New Jersey, 1972

(5) You Find Out, Kay L. Ware, Gertrude B. Hoffsten: Steck-Vaughn Co., Austin, Texas, 1970

(6) Things Around You, Kay L. Ware, Gertrude B. Hoffsten: Steck-Vaughn Co., Austin, Texas

EECD

TEACHER MATERIAL EVALUATION

UNIT____ GRADE______ ITEM EVALUATED____________________

1. Were the number of activities sufficient? ____________________

____

2. Was all required material readily available?__________________

____

3. Did the material lend itself to correlation with your usual science curriculum?____

____

4. Did the number of students in the class(es) affect the manner in which materials were used?___________________________________

____

5. Did the students comment on the materials?____________________

____

Students' comments:____

____

____

____

6. Did the materials fit the ability of the students?____________

____

7. Did you use other resources of materials?_____________________

____

What were they?____

EVALUATOR_________________________

TEACHER ACTIVITIES EVALUATION FORM

GRADE________

UNIT EVALUATED____________________

CONCEPT NO.	ACTIVITY NO.	EVALUATION:			
		EXCELLENT	GOOD	FAIR	POOR

COMMENTS:

BIRDS FLASH CARDS AND INFORMATION

KEY

BIRDS FLASH CARDS

FIGURE D - 01	Eastern Meadowlark
FIGURE D - 02	Brown Thrasher
FIGURE D - 03	Cardinal
FIGURE D - 04	House Sparrow
FIGURE D - 05	Loggerhead Shrike
FIGURE D - 06	Starling
FIGURE D - 07	Screech Owl
FIGURE D - 08	Ruby-throated Hummingbird
FIGURE D - 09	Carolina Wren
FIGURE D - 10	Blue Jay
FIGURE D - 11	Carolina Chickadee
FIGURE D - 12	Mockingbird
FIGURE D - 13	Common Grackle
FIGURE D - 14	Bobwhite Quail
FIGURE D - 15	Red-headed Woodpecker
FIGURE D - 16	Red-winged Blackbird
FIGURE D - 17	Mourning Dove
FIGURE D - 18	Red-bellied Woodpecker
FIGURE D - 19	Common Egret
FIGURE D - 20	Killdeer

BEST COPY AVAILABLE

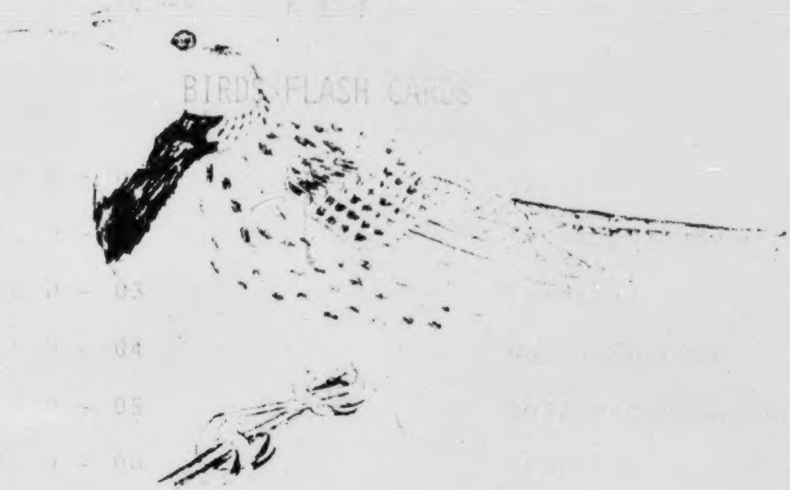


FIGURE D - 01

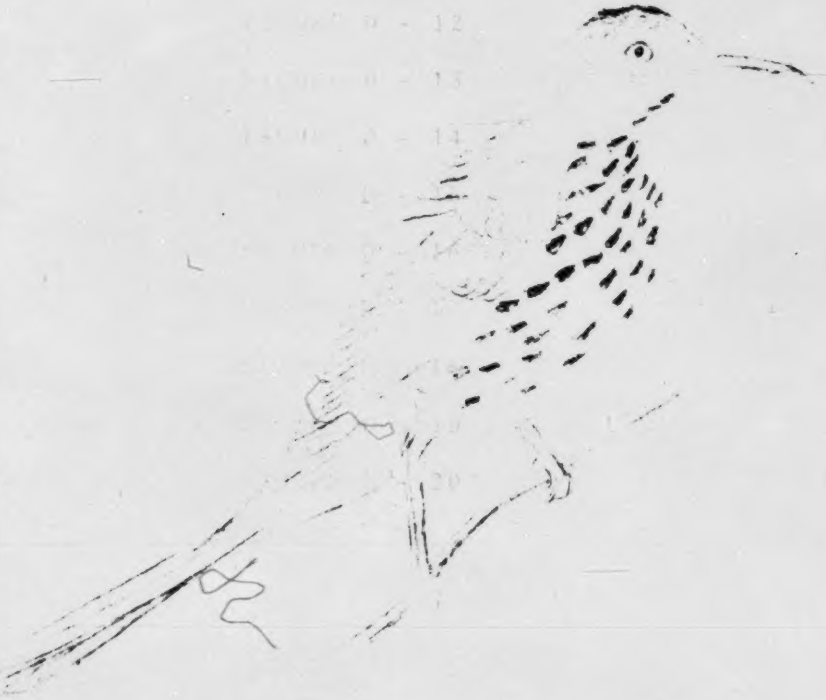


FIGURE D - 02

BEST COPY AVAILABLE

FLASH CARD INFORMATION

BIRDS

FIGURE D - 01 EASTERN MEADOWLARK

Description - Length 10 3/4 inches. Medium sized bird with brown back with black markings; bright yellow underparts; black chest band; and, white outer tail feathers.

Similar Species - Dickcissel.

Habitat - Open country with sufficient grassy covering for nesting.

Feeding Habits - Eats beetles, grasshoppers, and other insects in summer and weed seeds in winter.

Eggs - Usually 5 white eggs spotted with browns and purples.

Economic Status - Eats insects.

FIGURE D - 02 BROWN THRASHER

Description - Length 11½ inches. The thrasher's long, curved bill, long tail and brown streaked breast separate it from the thrushes.

Similar Species - Mockingbirds, Catbird, and other Thrashers.

Habitat - Dry thickets, brushy pastures, new second growth and woodland borders and openings.

Feeding Habits - 2/3 of their food is insects, the remaining is made up of berries, mast (chiefly acorns), and grain.

Eggs - 4 or 5 pale blue eggs are evenly covered with fine brown dots. Two broods are usually reared each year.

Economic Status - Eats insects.

BEST COPY AVAILABLE

FIGURE D - 03

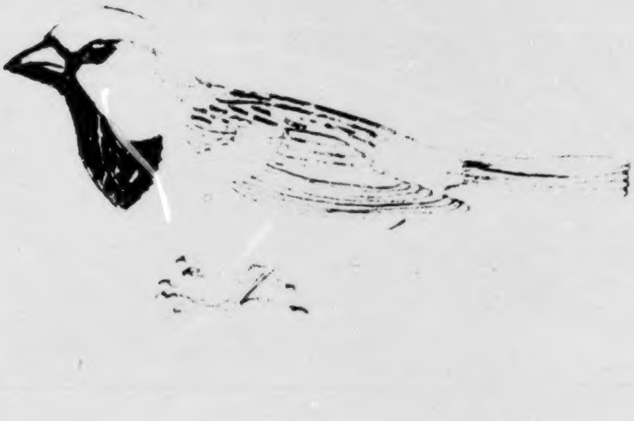


FIGURE D - 04

FIGURE D - 03 CARDINAL

Description - Length 8¼ inches. Its crest, big conical bill, and black face sets the male apart from any other red bird. The brown female always has some patches of red and a very conspicuous red bill.

Similar Species - Other members of the Sparrow family.

Hibitat - Any place where the thickets and tangles are dense near the open areas, field edges, woodland borders, stream banks, open swamps, parks and residential districts.

Feeding Habits - Wild seed and fruit are the chief foods, supplemented by a variety of insects.

Eggs - The 3 or 4 eggs are white or greenish and variably spotted with reddish-brown, one is often quite unlike the others. Two broods are raised.

Economic Status - Eats insects and has some aesthetic value.

FIGURE D - 04 HOUSE SPARROW (ENGLISH SPARROW)

Description - Length 6 1/3 inches. Males' have curving red streak behind the eyes with white spots below and on upper part of wings; dark breast with off-white underside, and brown wings and tail. Females are similar, but lack red and white coloring and dark breast.

Similar Species - Other members of Weaver Finch family.

Habitat - Urban or agricultural communities in any temperate area. Flock to gether at night in or on buildings, trees or vine-covered walls.

Feeding Habits - Summer - chiefly insects plus green vegetables, fruits, and seeds. Fall and winter - weed seeds and waste grain.

Eggs - 5 or 6 grayish white eggs evenly speckled with brown; several broods are raised annually.

Economic Status - Eats insects. At times considered a pest because it eats much grain and causes problems (clogged gutters, air vents, etc.) with its nests.

BEST COPY AVAILABLE

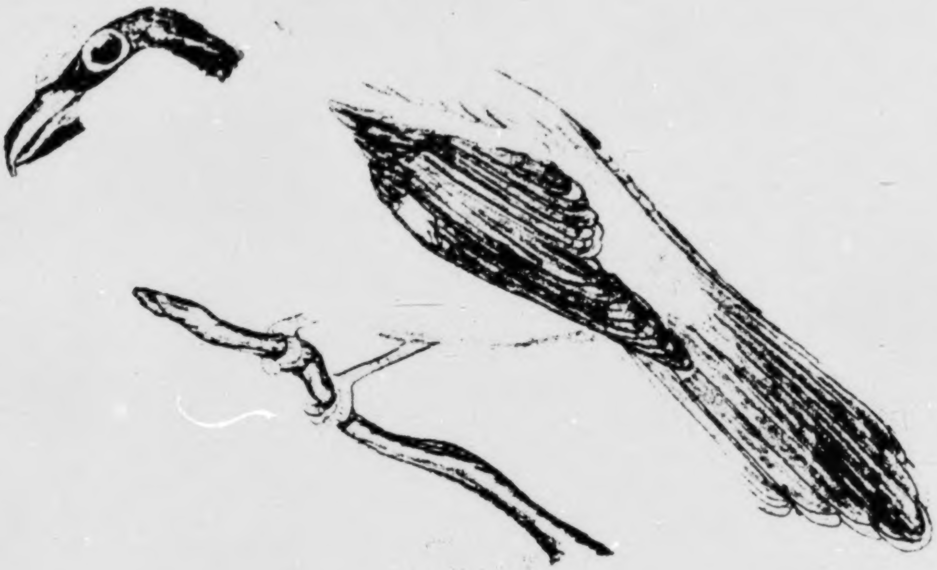


FIGURE D - 05

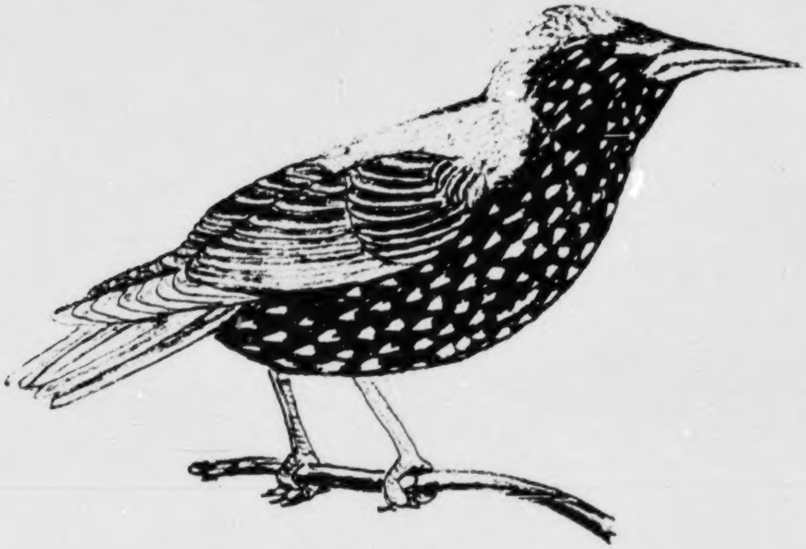


FIGURE D - 06

BEST COPY AVAILABLE

FIGURE D - 05 LOGGERHEAD SHRIKE

Description - Length 9 inches. Plump, big-headed, slim-tailed bird. Adults are clear white below and black-billed with black feathers across the forehead at the base of the bill.

Similar Species - Northern Shrike.

Habitat - Rural areas with fields, hedgerows, scattered trees, fences and public utility poles and wires.

Feeding Habits - The chief foods are large insects like grasshoppers and crickets; but, snakes, lizards, frogs, mice, and birds are also eaten. The bird usually hangs these on a thorn or fence wire barb so it can tear the food into pieces big enough for swallowing.

Eggs - The 4 to 6 white eggs are thickly marked with browns and grays.

Economic Status - Eats insects, snakes and small rodents.

FIGURE D - 06 STARLING

Description - Length 8½ inches. A chunky, shirt-tailed "blackbird" with a long pointed bill and pointed wings. In spring the bill is yellow, at other seasons it is dusky brown.

Similar Species - None.

Habitat - Most rural areas with plowed croplands, jayfields, and pastures. During winter many roost on or about buildings in towns and cities.

Feeding Habits - Eats beetles, weevils, grasshoppers, and other insects. At times they eat wild fruits, cherries, mulberries, and some seeds.

Eggs - The 4 or 5 pale blue eggs are unmarked; two broods and occasionally 3 are raised.

Economic Status - Eats insects. At times it carries the disease encephalitis to humans. Its aggressiveness in nesting causes declines in native species.

BEST COPY AVAILABLE

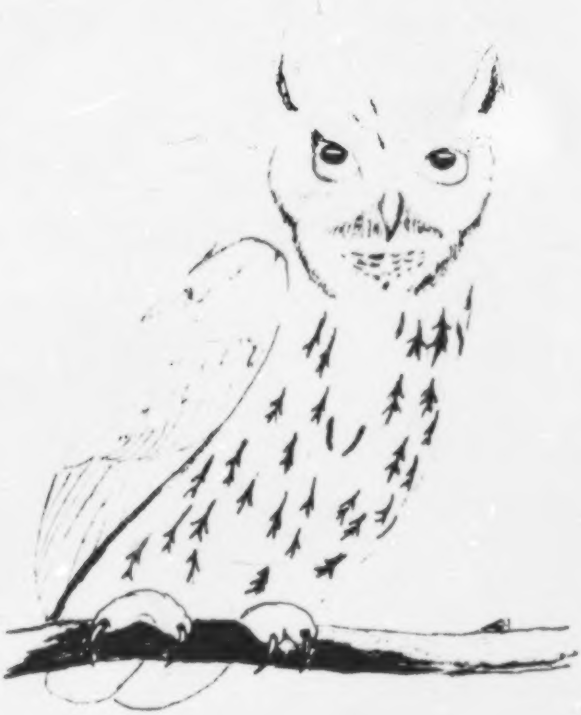


FIGURE D - 07

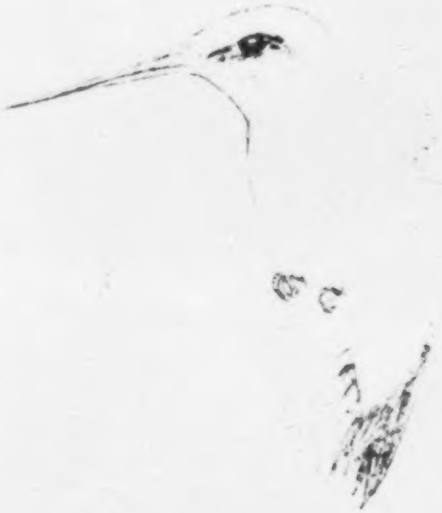


FIGURE D - 08

BEST COPY AVAILABLE

FIGURE D - 07 SCREECH OWL

Description - Length 10 inches. This owl occurs in 2-color phases-first, a rich reddish red-yellow; the other an almost solid gray. It is our smallest "horned" or "eared" owl, the name referring to the tufts of feathers on its head.

Similar Species - Other Owls.

Habitat - A common bird of open woodlsnds and clearings, orchards and suburbs.

Feeding Habits - Eats almost any animal food depending on what is readily available.

Eggs - Usually 4 or 5 white eggs.

Economic Status - Eats insects and rodents.

FIGURE D - 08 RUBY-THROATED HUMMINGBIRD

Description - Length 3½ inches. Male is ruby-throated, with a long beak, the top of the head is green and the bottom is white. The female does not have a ruby throat and has white tips on the tail.

Similar Species - Other Hummingbirds.

Habitat - Common wherever flowers occur.

Feeding Habits - Its protien food is small insects. It also eats nectar, sap and sugar water.

Eggs - 5 white eggs.

Economic Status - Eats insects and aids in pollinating flowers, has aesthetic value.

BEST COPY AVAILABLE

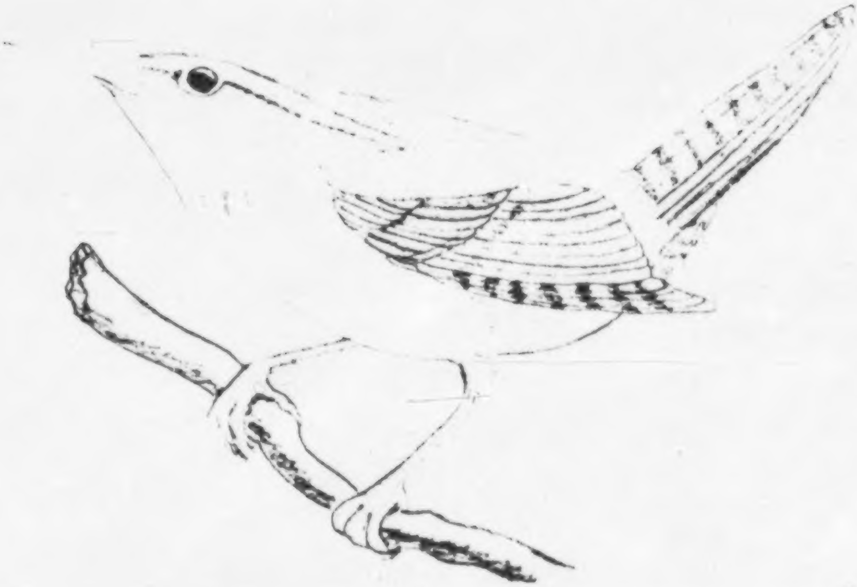


FIGURE D - 09

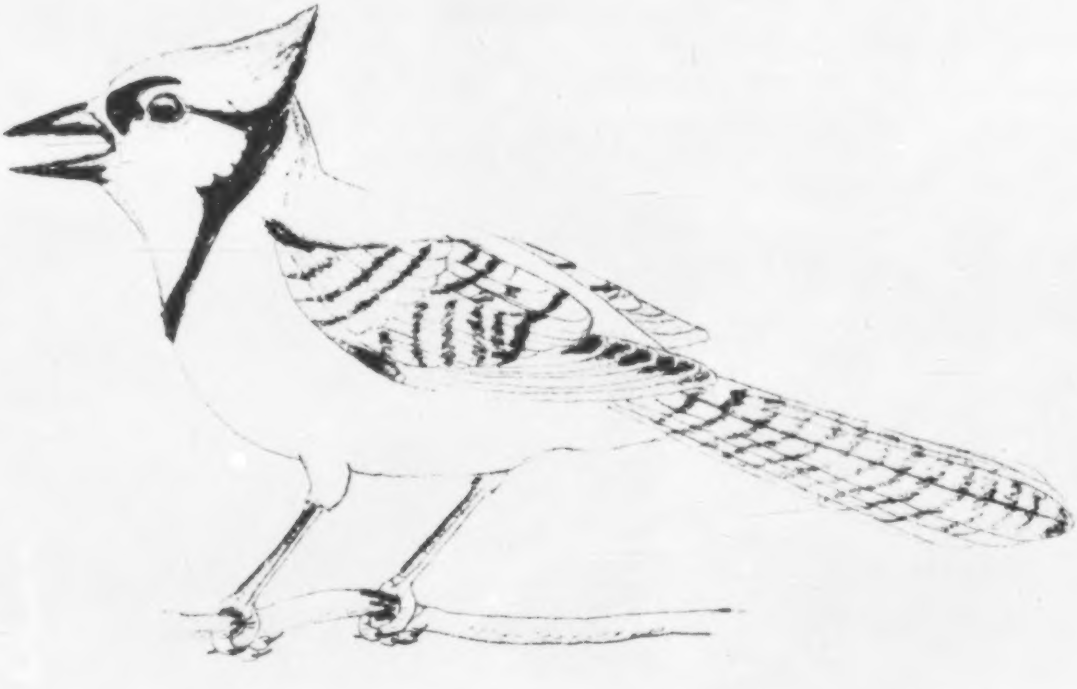


FIGURE D - 10

FIGURE D - 09 CAROLINA WREN

Description - Length 5 3/4 inches. A large chunky wren, redder above than any other and buffy below, especially on the sides.

Similar Species - Other Wrens.

Habitat - Woodland thickets, stream-bank tangles, fallen treetops, and rocky, brush-grown slopes.

Feeding Habits - Feeds on insects, plus a few berries and seeds.

Eggs - The 5 whitish eggs are variable but generally heavily spotted with browns.

Economic Status - Eats insects.

FIGURE D - 10 BLUE JAY

Description - Length 11 3/4 inches. Black conical beak. Tuft of feathers on top of head, blue wings and tail with white and black streaks. Underside of head and body is off-white.

Similar Species - Other Jays.

Habitat - Open oak and beech forests.

Feeding Habits - Eats mostly acorns, beechnuts, and corn. In summer it eats mostly insects.

Eggs - The 4 to 6 eggs are buff to greenish and spotted with brown, most heavily at the large end.

Economic Status - Eats insects, buries acorns and beechnuts thus planting oak and beech forests; they also have aesthetic value.

BEST COPY AVAILABLE

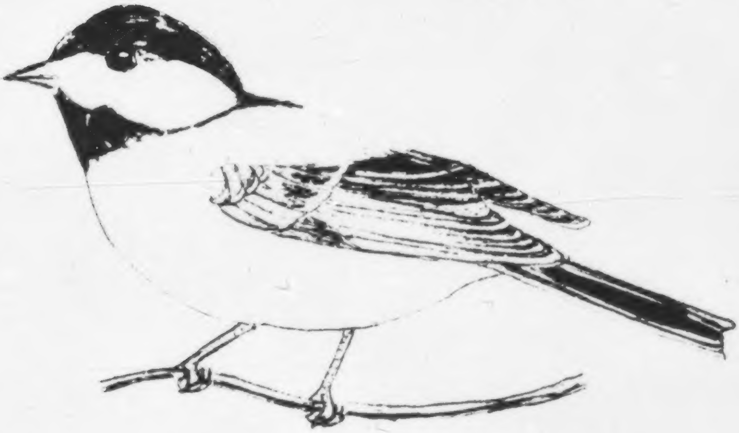


FIGURE D - 11

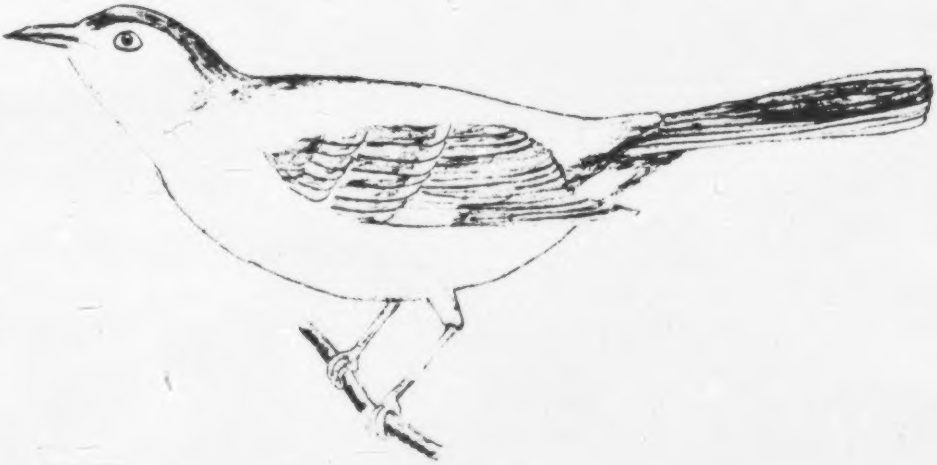


FIGURE D - 12

FIGURE D - 11 CAROLINA CHICKADEE

Description - Length 4½ inches. This small southern chickadee has a relatively shorter tail and larger bill, more uniformly gray wings, and a sharp line of separation between the black of the throat and the white of the breast than the Black-capped Chickadee.

Similar Species - Other Chickadees.

Habitat - Wet woodlands.

Feeding Habits - Eats mostly moths and their larvae and eggs, acorns and poison ivy seeds.

Eggs - 6 to 8 white eggs lightly speckled with brown.

Economic Status - Eats moths.

FIGURE D - 12 MOCKINGBIRD

Description - Length 10½ inches. A long-tailed, pale gray bird with white wing patches and outer tail feathers.

Similar Species - Catbird, Brown Thrasher, Long-billed Thrasher, and Curce-billed Thrasher.

Habitat - Large open areas with a few trees, dense shrubbery, and a variety of edible fruits.

Feeding Habits - Their chief foods are berries, seeds, and fruits; supplemented by insects at certain seasons.

Eggs - The 3 to 5 greenish to buffy eggs are blotched and spotted with brown.

Economic Status - Eat insects.

BEST COPY AVAILABLE

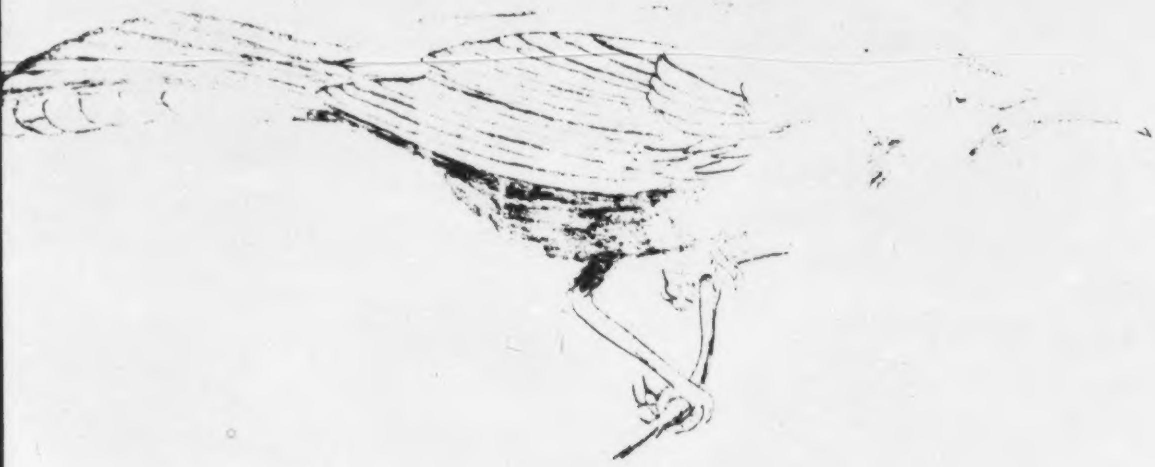


FIGURE D - 13

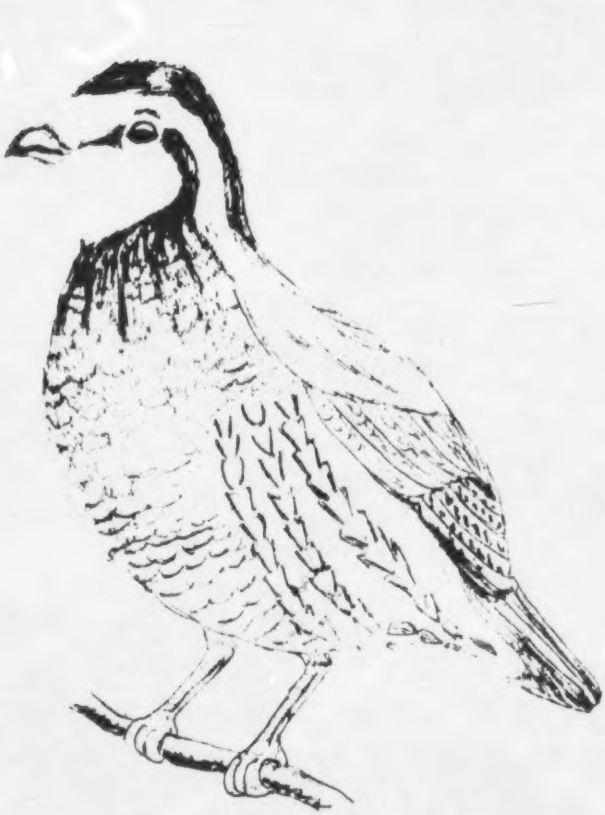


FIGURE D - 14

FIGURE D - 13 COMMON GRACKLE

Description - Length 12 inches. The long wedge-shaped tail, which the males often "keel" in flight by depressing the central feathers is the best field mark. The iridescent sheen on the black plumage varies from green or blue to purple.

Similar Species -Other Grackles.

Habitat - Open croplands and closely grazed pastures; city lawns and parks.

Feeding Habits - Eats beetles, grasshoppers, and weevils, acorns, beechnuts, wild fruits, and waste grains, especially corn.

Eggs - The 5 pale bluish eggs are spotted and scrawled with brown or black.

Economic Status - Eats insects, but they can be quite destructive to unharvested crops.

FIGURE D - 14 BOBWHITE QUAIL

Description - Length about 8 inches. Chicken-like bird, short rounded wings, and a short gray tail. Male is distinguished by the white eye stripe and chin. In the female, these areas are light brown.

Similar Species - Domesticated, imported quails.

Habtiat - Open fields with dense vegetation on borders or grassy fields.

Feeding Habits - Eats insects, grain, small berries, and weed seeds.

Eggs - 12 small white eggs.

Economic Status - Eats insects and are game birds.

BEST COPY AVAILABLE

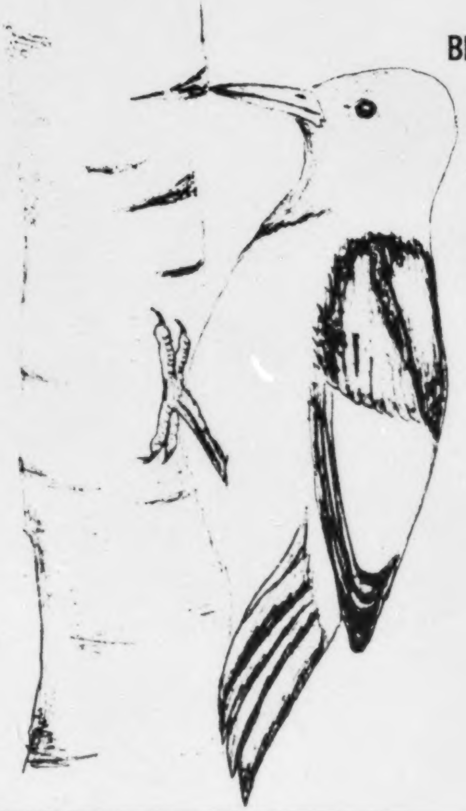


FIGURE D - 15

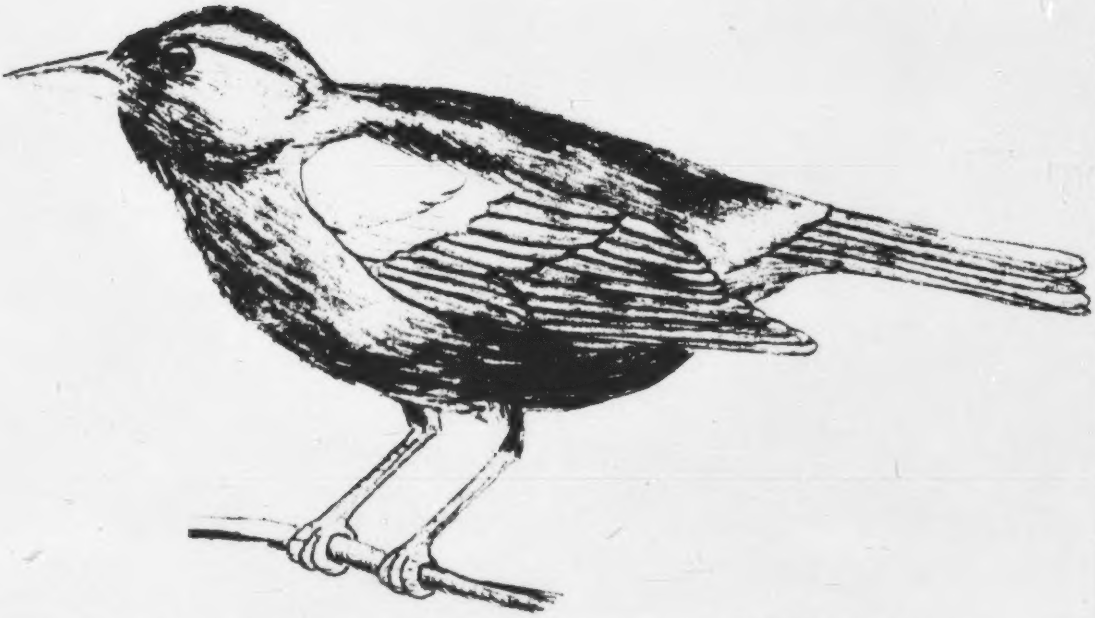


FIGURE D - 16

FIGURE D - 15 RED-HEADED WOODPECKER

Description - Length 9 3/4 inches. Red head, upper body purplish-black with white feathers on back half of wings and at base of tail.

Similar Species - Other Woodpeckers.

Habitat - Summer -open country around farms, rural roads, and residential areas. Winter-forests.

Feeding Habits - Feeds on grubs and other insects in dead wood and many flying insects during the summer. In winter it eats small acorns and beechnuts.

Eggs - Five pure white eggs and 2 broods are common.

Economic Status - Eats insects, may cause damage to utility poles.

FIGURE D - 16 RED-WINGED BLACKBIRD

Description - Length 9½ inches. Distinguishing characteristic is the red patch bordered with yellow on the wing. Beak is gray and body is black.

Similar Species - Other Blackbirds.

Habitat - Fresh-water marshes and croplands, hay-fields, orchards and woodlands nearby.

Feeding Habits - Insects during the summer and weed seeds and unharvested grain in winter.

Eggs - 3 to 5 pale bluish eggs are marked with blackish-purple dots, blotches and zigzag lines.

Economic Status.- They feed on many corp destroying insects and big flocks flying over a field can significantly reduce the number.

BEST COPY AVAILABLE

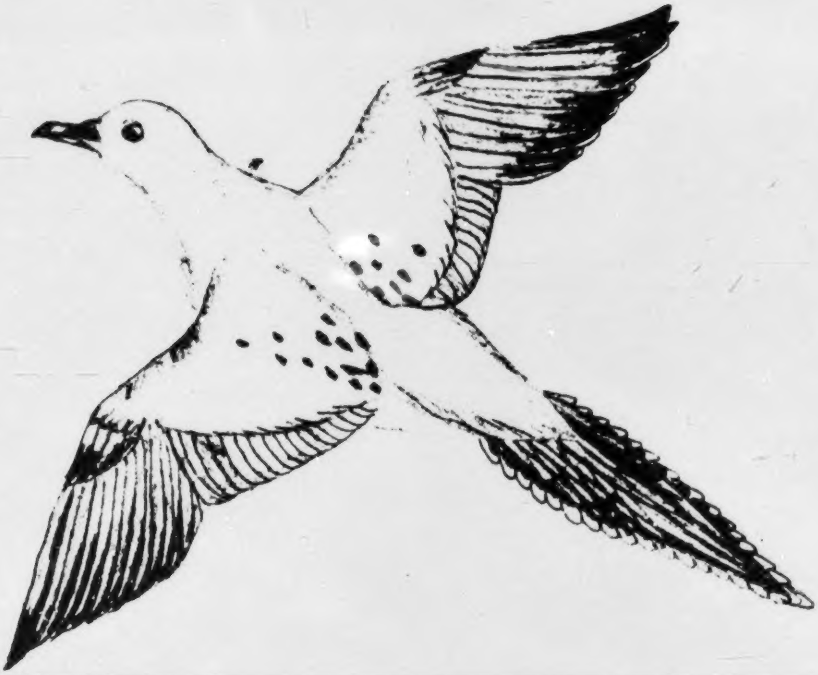


FIGURE D - 17

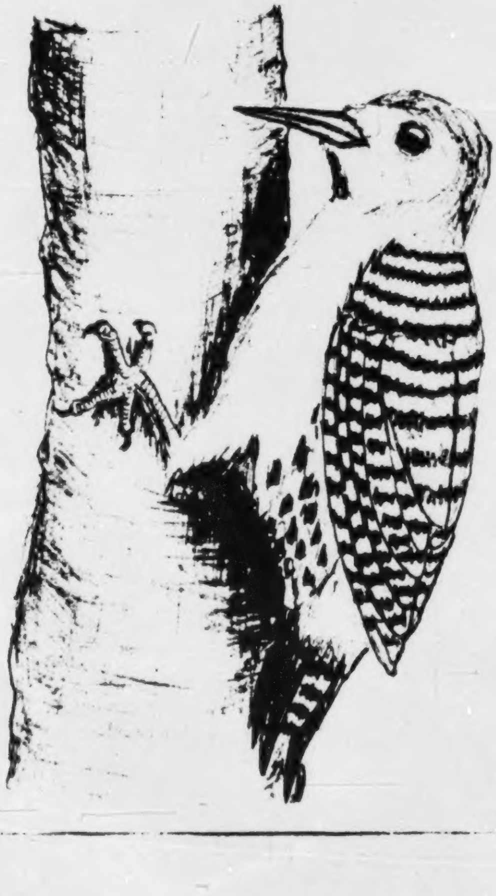


FIGURE D - 18

FIGURE D - 17 MOURNING DOVE

Description - Length averages about 12 inches. It is a member of the pigeon family but it is somewhat smaller. It has a long pointed tail. The body is grayish-brown, with white feathers in the tail which show in flight.

Similar Species - Other members of the pigeon family.

Habitat - Open fields bordered by woodlands.

Feeding Habits - Almost 100% of the dove's food is made up of seeds.

Eggs - 2 eggs. Usually three successful broods per year.

Economic Status - Game bird. More doves are taken each year than any other bird.

FIGURE D - 18 RED - BELLIED WOODPECKER

Description - Length 9½ inches. The finely striped "zebra" back and the scarlet head make identification easy. The reddish tinge on the belly is almost impossible to see in the field.

Similar Species - Other Woodpeckers.

Habitat - Abundant in swamp and bottomland woods and they frequent in most other woods.

Feeding Habits - It feeds on ants, beetles and beech and acorn mast, corn and wild fruits.

Eggs - 4 or 5 dull white eggs.

Economic Status - Eats insects.

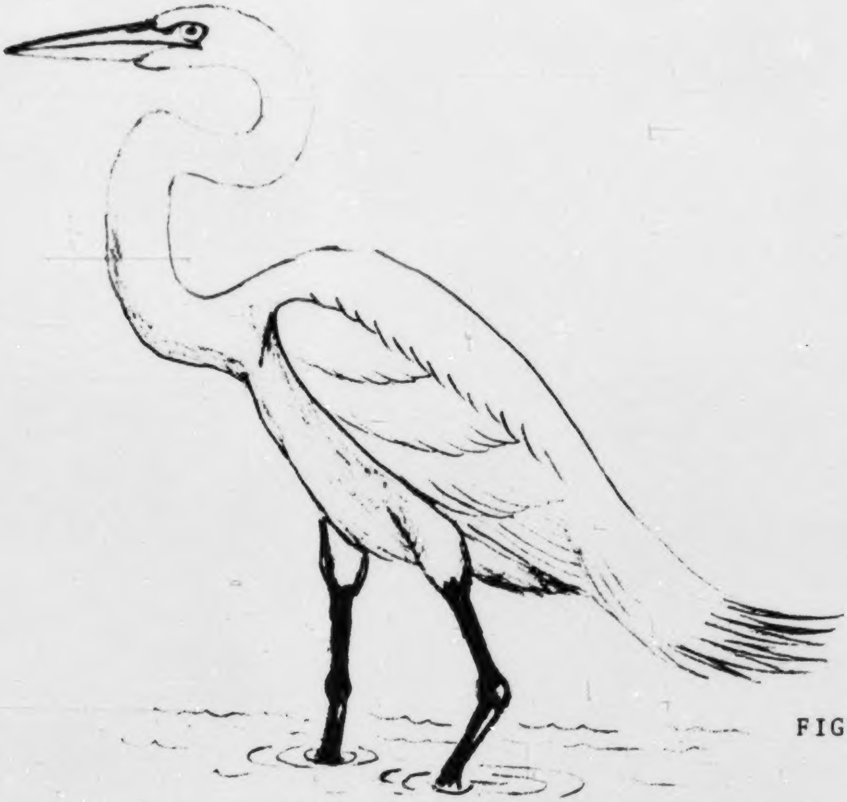


FIGURE D - 19

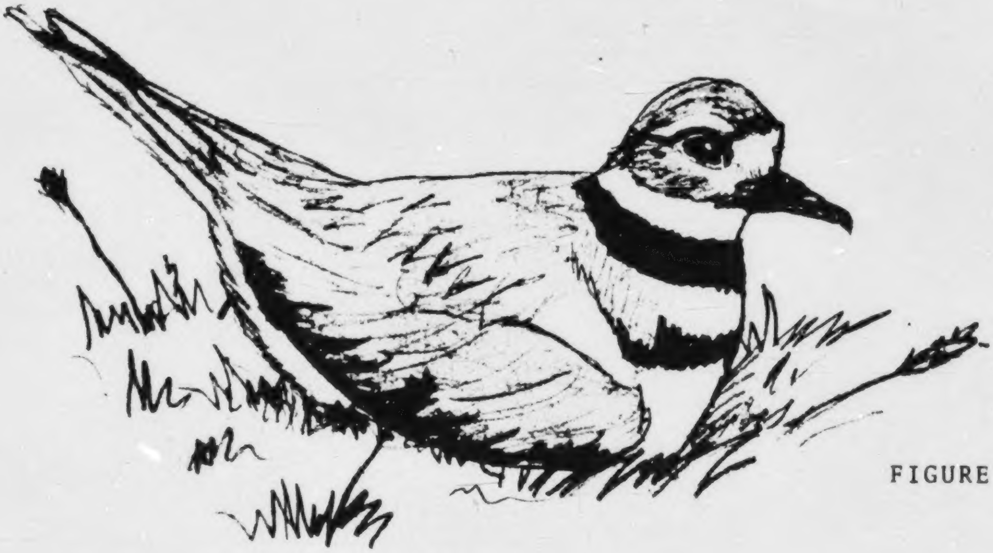


FIGURE D - 20

FIGURE D - 19 COMMON EGRET

Description - Average length is 37 to 40 inches. Has long legs, neck, and bill. The feathers are white. The bill is yellow. The legs and feet are glossy black.

Similar Species - Snowy Egret and young Little Blue Herons

Habitat - Common along streams, ponds, rice fields, salt-water and fresh-water marshes, and mudflats.

Feeding Habits - Feeds mostly on aquatic animals such as fish, frogs, crustacorns, insects, and snakes.

Eggs - 3 to 5 bluish eggs.

Economics Status - Help in controlling aquatic animal populations.

FIGURE D - 20 KILLDEER

Description - Average length is 8 to 11 inches. Has relatively long legs, white underparts, two black breast bands, and is orange-colored on upper tail and lower back.

Similar Species - Semipalmated Plover and Wilson's Plover.

Habitat - Open fields and pastures.

Feeding Habits - Feeds on insects and small invertebrate animals such as earthworms.

Eggs - 3 or 4 buff-colored eggs with dark blotches on them.

Economic Status - Is a game bird in some states. Helps to control insects and other invertebrates.

FISH FLASH CARDS AND INFORMATION

KEY

FISH FLASH CARDS

FIGURE E - 01	Mosquito Fish (Common Minnow)
FIGURE E - 02	Channel Catfish
FIGURE E - 03	White Crappie (Sac-a-lait)
FIGURE E - 04	Barfish
FIGURE E - 05	Bowfin or Freshwater Dogfish (Choupique)
FIGURE E - 06	American Eel
FIGURE E - 07	Bluegill Sunfish
FIGURE E - 08	Grass Pickerel
FIGURE E - 09	Striped Mullet
FIGURE E - 10	Largemouth Bass
FIGURE E - 11	Gizzard Shad
FIGURE E - 12	Sailfin Molly
FIGURE E - 13	Freshwater Drum (Gaspergou)
FIGURE E - 14	Paddlefish (Spoonbill Catfish)
FIGURE E - 15	Yellow Bullhead
FIGURE E - 16	Largemouth Buffalo
FIGURE E - 17	Shortnose Gas
FIGURE E - 18	European Carp
FIGURE E - 19	Longear Sunfish
FIGURE E - 20	Flathead Catfish

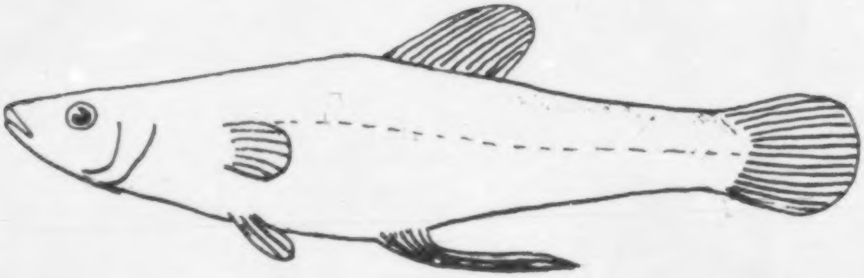


FIGURE E - 01

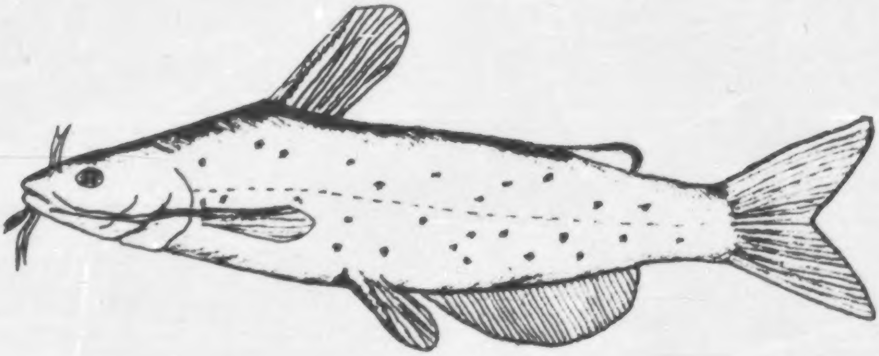


FIGURE E - 02

BEST COPY AVAILABLE

FLASH CARD INFORMATION

FISH

FIGURE E - 01 MOSQUITOFISH (COMMON MINNOW)

Description - Light olive in color, each scale has dark edges. Length is about 1½ inches.

Similar Species - Least Killfish and Sailfin.

Habitat - Ponds, lakes, streams and rivers.

Feeding Habits - Eats microscopic plants and animals.

Economic Status - Used as bait fish and food for larger fish.

FIGURE E - 02 CHANNEL CATFISH

Description - Whitish below and on sides, bluish on back, sides with irregular spots. Reaches a weight of over 20 pounds.

Similar Species - Other Catfish.

Habitat - Rivers and Bayous.

Feeding Habits - Feeds on plants and smaller fish.

Economic Status - Commercial fish.

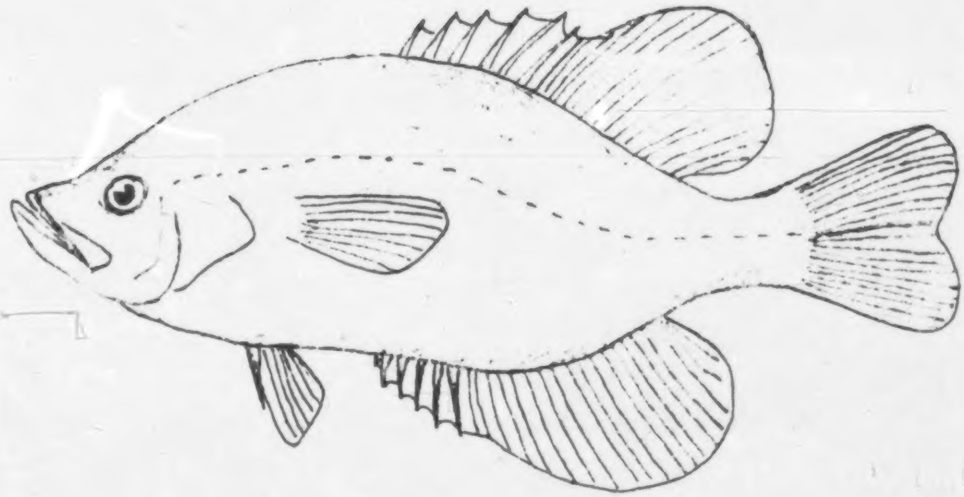


FIGURE E - 03

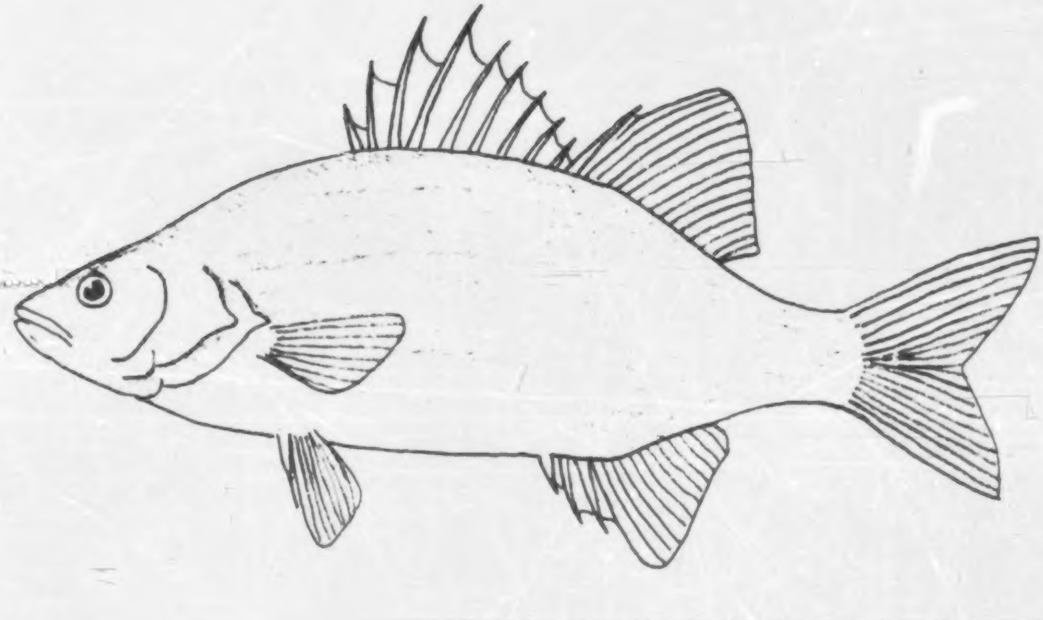


FIGURE E - 04

FIGURE E - 03 WHITE CRAPPIE (SAC-A-LAIT)

Description - Silvery white, mottled with dark green or black and with vertical bars on sides. Length up to 12 inches.

Similar Species - Black Crappie.

Habitat - Lakes and streams.

Feeding Habits - Crawfish, small fish and other small animals.

Economic Status - Game fish.

FIGURE E - 04 BARFISH (YELLOW BASS)

Description - Sides with 7 black stripes along the length of its body. Gills are brassy yellow. Length is about 18 inches.

Similar Species - White Bass, Striped Bass and White Perch.

Habitat - Shallow Streams and shallow parts of rivers.

Feeding Habits - Crawfish, small fish and other small animals.

Economic Status - Game fish.

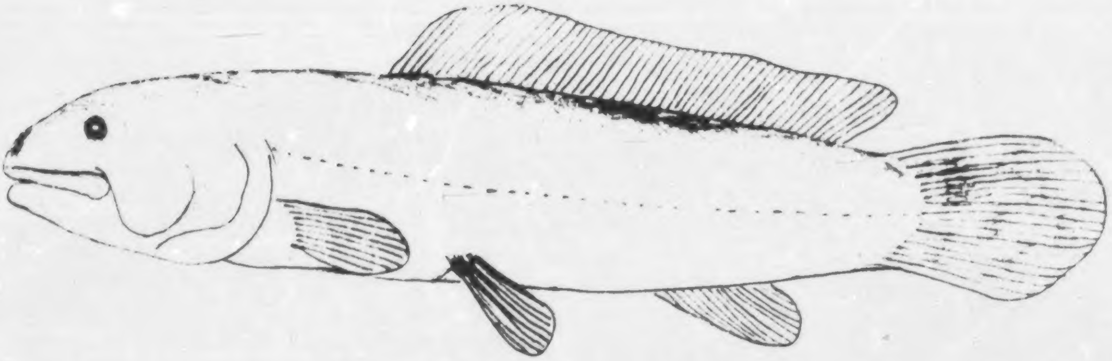


FIGURE E - 05

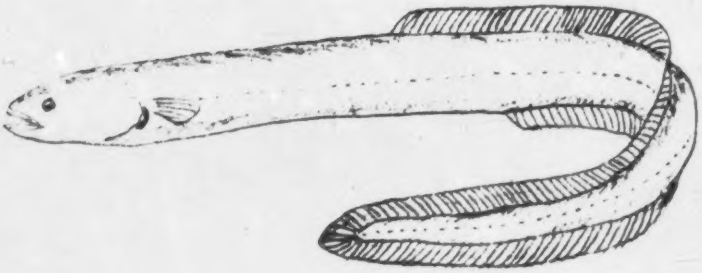


FIGURE E - 06

FIGURE E - 05 BOWFIN or FRESHWATER DOGFISH (CHOUPIQUE)

Description - Long dorsal (back) fin reaching almost to the caudal (tail) fin. Olive green on the back, shading is lighter on the sides to yellow on the belly. The males have an "Eye spot" at the base of the caudal fin.

Similar Species - None.

Habitat - Sluggish rivers and shallow lakes.

Feeding Habits - Feeds on all sorts of living animals, preying heavily on small fishes.

Economic Status - Used as a filler in crawfish balls and patties.

FIGURE E - 06 AMERICAN EEL

Description - The body is very long and slender, reaching a length of over two feet. The skin is yellowish-brown and has a smooth appearance as the scales are very small. The dorsal (back) fin is very long and continuous with the caudal (tail) fin and the anal (bottom) fin. The gills are very small.

Similar Species - None.

Habitat - Live in rivers but lay eggs in the deep Atlantic near Bermuda.

Feeding Habits - Feed on all kinds of animal food, both dead and alive.

Economic Status - Important for food in many many places and are sometimes caught and sold commercially.

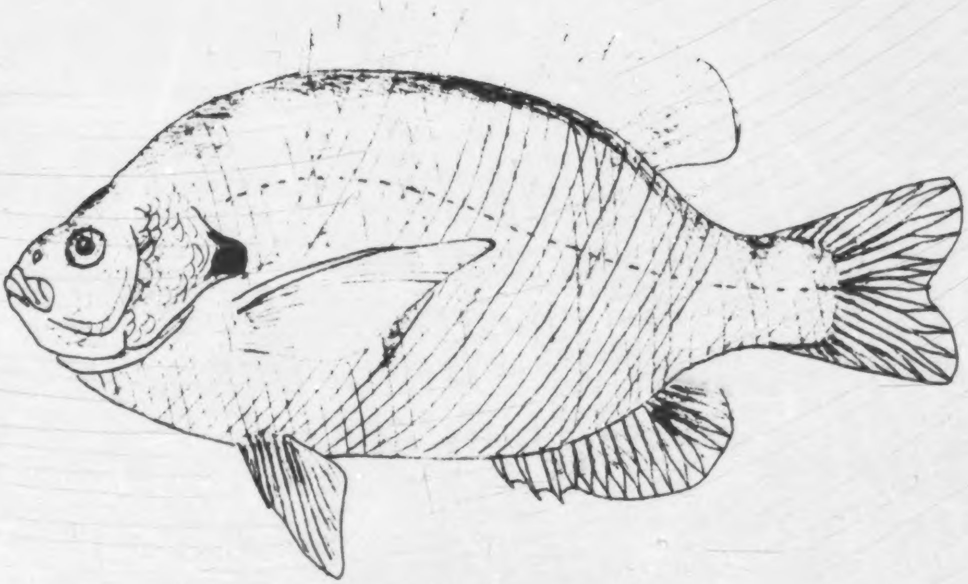


FIGURE E - 07

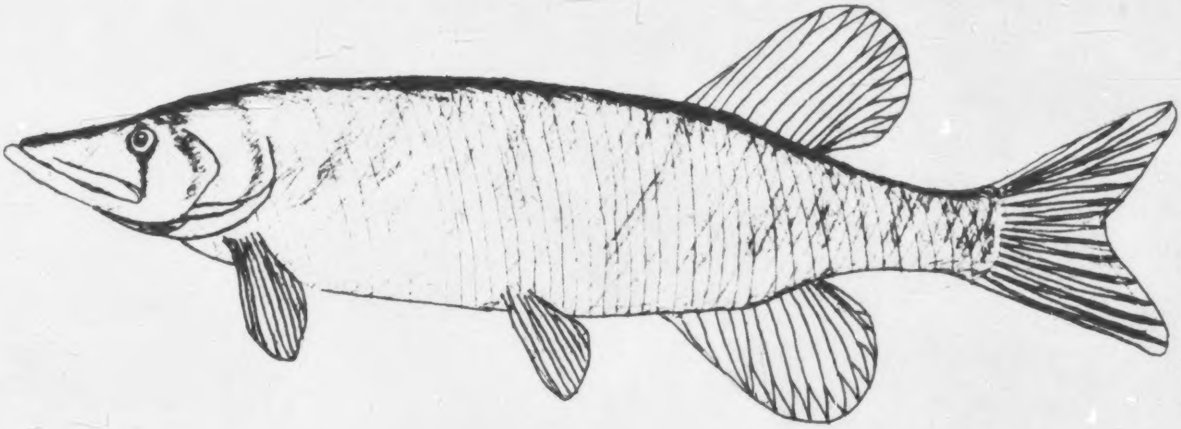


FIGURE E - 08

FIGURE E - 07 BLUEGILL SUNFISH

Description - Olive green with some blue and orange on body; a dark spot at the back end of the dorsal (back) fin; vertical bars on the sides. The lobe on the gills are solid black.

Similar Species - Largemouth Bass, Smallmouth Bass, Redeye Black bass, Crappie and other mambers of the Sunfish family.

Habitat - Prefers the warmer lakes and streams from southern Canada to the Gulf of Mexico.

Feeding Habits - Small aquatic animals.

Economic Status - Pan fish (small game fish).

FIGURE E - 08 GRASS PICKEREL or MUD PICKEREL

Description - Sides and back are marked with dark wavy or wormy vertical streaks. Body is long and round with duck-billed shaped jaws, the mouth has many fang-like teeth. The dorsal (back) fin is soft and located far back on the body.

Similar Species - Other Pickerels and Pikes.

Habitat - Rivers and Streams.

Feeding Habits - Feed on fishes and any other living animals small enough to seize.

Economic Status - A popular game fish in some parts of the country.

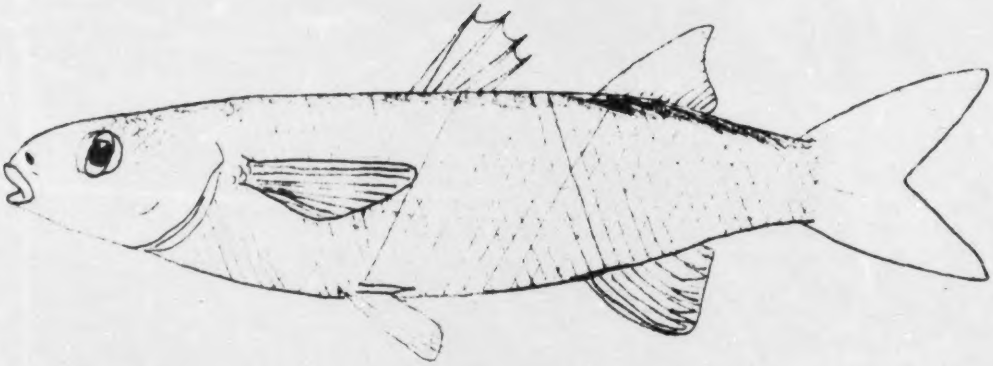


FIGURE E - 09

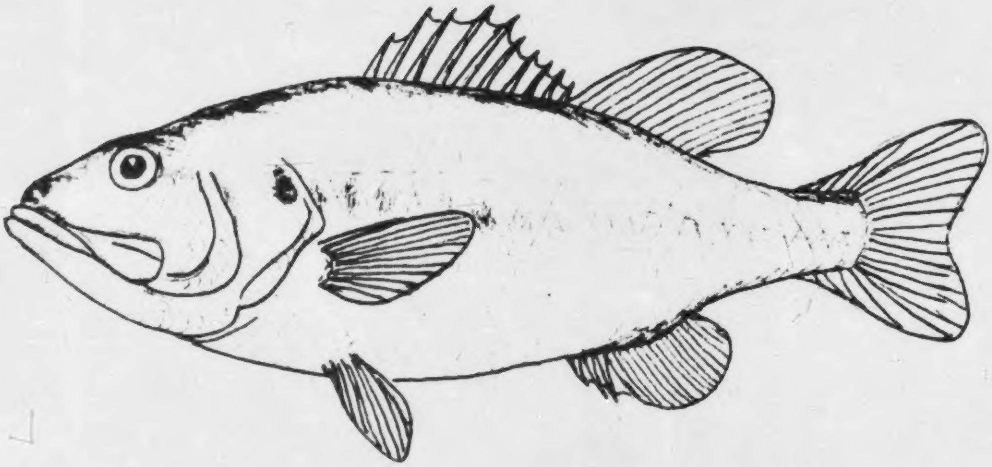


FIGURE E - 10

FIGURE E - 09 STRIPED MULLET

Description - Small weak mouths; a small 4 spined dorsal (back) fin considerably in advance of the soft portion of the dorsal fin. The pectorals (side fins) are located high on the sides of the body. Grows up to 2 feet in length.

Similar Species - Other Mullets.

Habitat - Rivers and bayous along the Gulf Coast.

Feeding Habits - Small animals and plants found on the bottom.

Economic Status - In our area they are used as bait in crawfish traps.

FIGURE E - 10 LARGEMOUTH BASS

Description - Dark green above with sides and belly silvery; a dark band runs along the length of its sides. Length up to 20 inches or more.

Similar Species - The Sunfishes, Crappies and Black Basses.

Habitat - Prefer the warmer lakes and streams from southern Canada to the Gulf of Mexico.

Feeding Habits - Smaller fishes, rats, mice, birds, insects, crawfish, etc.

Economic Status - Largest and most popular game fish in our area.

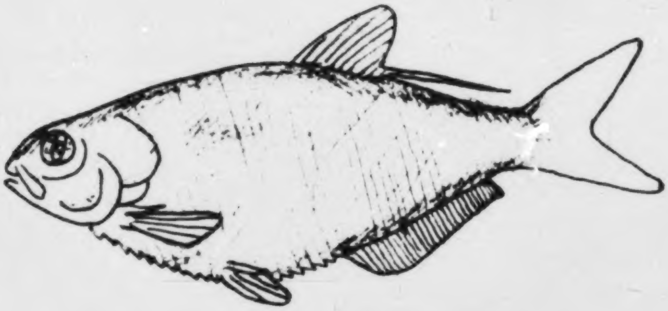


FIGURE E - 11

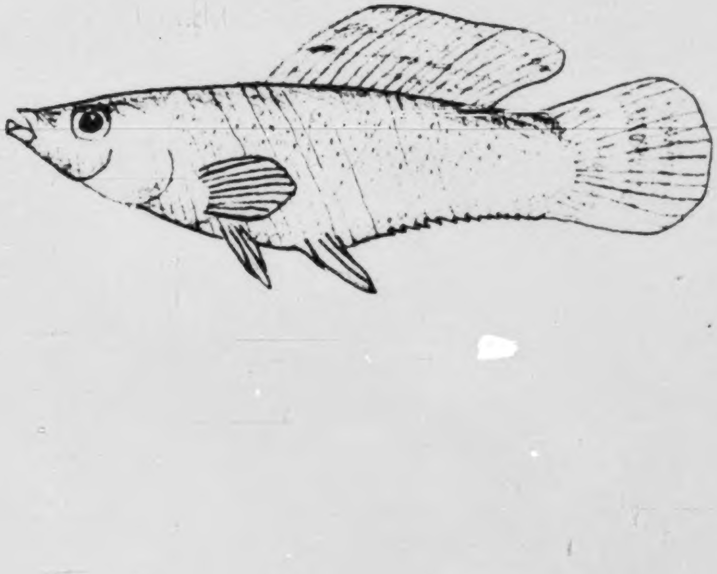


FIGURE E - 12

FIGURE E - 11 GIZZARD SHAD

Description - Saw-toothed edge on the belly, a thin fish with silvery scales and bluish back. It has a spot on the side and the last ray of the dorsal (back) fin is very long. Length is up to 18 inches.

Similar Species - Threadfin Shad, River Herring, Ohio Shad, American Shad, Alabama Shad and Alewife.

Habitat - Freshwater streams.

Feeding Habits - Strain out and utilize larger plankton crustacea.

Economic Status - Used to bait crawfish traps, also used to make pet food.

FIGURE E - 12 SAILFIN MOLLY

Description - Light olive green above and lighter below, somewhat spotted (each scale has a spot). Dorsal (back) fin marked with rows of spots; caudal (tail) fin marked with an entire black margin. Length is about 3 inches.

Similar Species - Mosquito fish and Least Killfish.

Habitat - Freshwater lakes and streams.

Feeding Habits - Feeds mostly on the bottom eating small plants and animals.

Economic Status - Commercial fish.

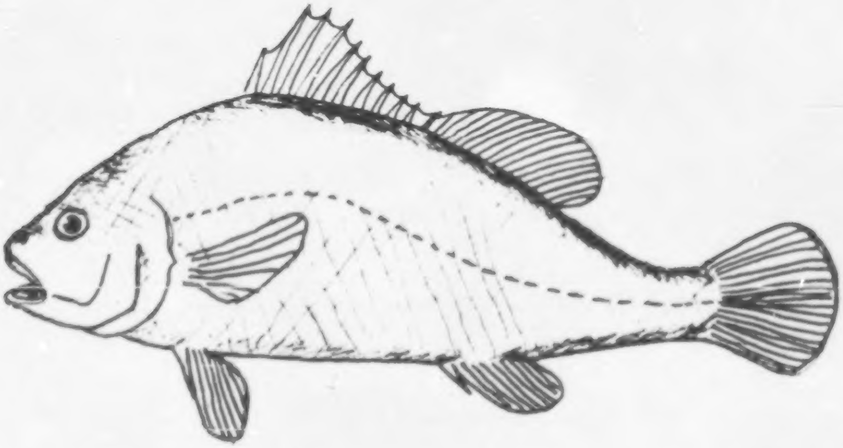


FIGURE E - 13

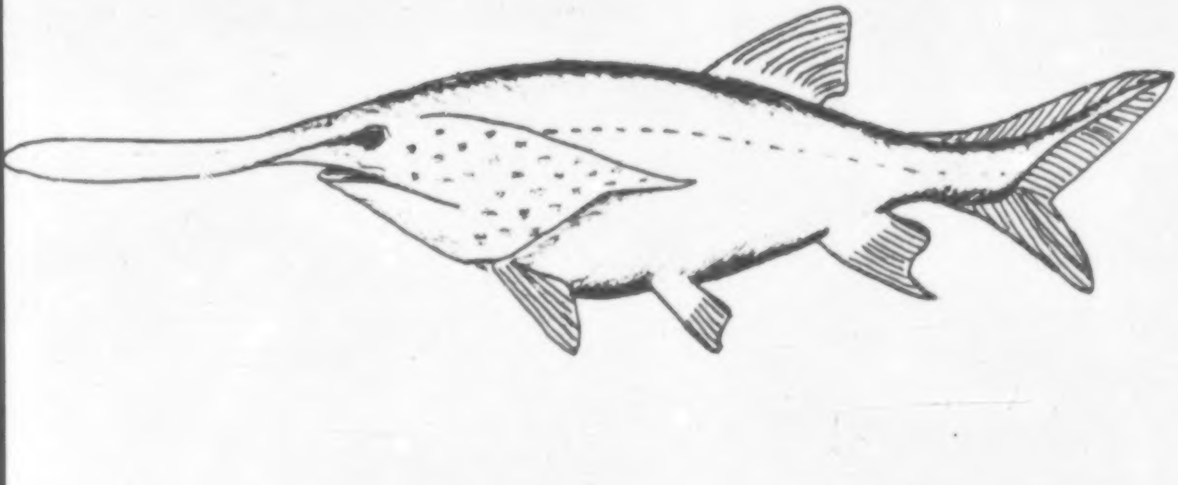


FIGURE E - 14

FIGURE E - 13 FRESHWATER DRUM (GASPERGOU)

Description - A deep bodied silvery fish with a high back and a long dorsal (back) fin. It reaches a size of 10 pounds or more and a length of several feet.

Similar Species - Sea Drum, Spot, Croaker, and Sea Trout.

Habitat - Freshwater lakes and streams.

Feeding Habits - Feeds mostly on the bottom, eating small plants and animals.

Economic Status - Commercial fish.

FIGURE E - 14 PADDLEFISH (SPOONBILL CATFISH)

Description - It is characterized by a long, flat snout resembling a paddle. The body is covered by a smooth skin like that of a catfish.

Similar Species - None.

Habitat - Large streams and connected waters of the Mississippi River.

Feeding Habits - They strain out the plankton crustacea (microscopic animals) and other small animals through their gills.

Economic Status - Commercial fish. The eggs are sometimes used for caviar.

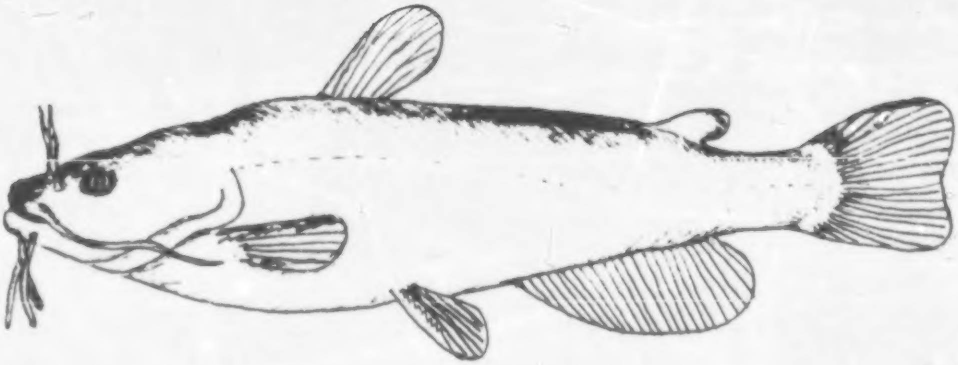


FIGURE E - 15

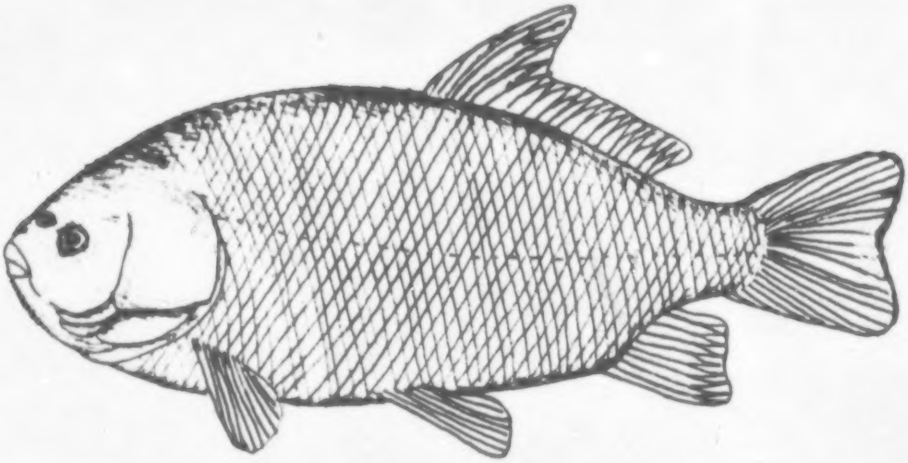


FIGURE E - 16

FIGURE E - 15 YELLOW BULLHEAD (POLYWOG)

Description - Color varies, back varies from shades of brown to black; the belly is more or less yellow. It reaches a length of 18 inches.

Similar Species - Brown Bullhead, Flat Bullhead, Black Bullhead, Stonecat, and Madtoms.

Habitat - Streams, ponds, lakes, and sewerage ditches.

Feeding Habits - Eat all types of plant and animal material.

Economic Status - Commercial fish.

FIGURE E - 16 LARGEMOUTH BUFFALO FISH

Description - The mouth is large with the upper lip about level with the lower margin of the eye. The head is naked, and the body is covered with smooth scales.

Similar Species - Bluw Sucker and Carpsucker.

Habitat - Streams, rivers and lakes.

Feeding Habits - They feed on the bottom where they eat a large variety of animal matter and some plant material.

Economic Status - Commercial fish.

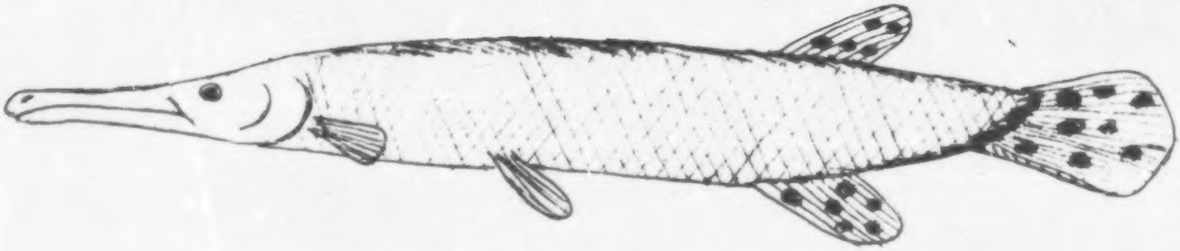


FIGURE E - 17

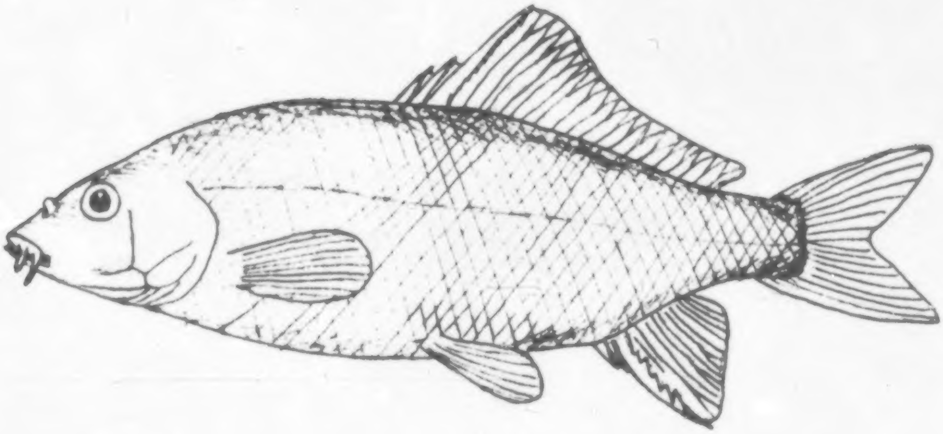


FIGURE E - 18

FIGURE E - 17 SHORTNOSE GAR

Description - The head is covered with bony plates; it has a long cylindrical body covered with scales; has relatively long jaws heavily armed with sharp teeth. It grows to a length of three to four feet.

Similar Species - Alligator Gar, Longnose Gar, and Spotted Gar.

Habitat - Warm sluggish waters.'

Feeding Habits - Feeds on all kinds of fishes both dead and alive.

Economic Status - Used as a filler in fish balls and crawfish balls.

FIGURE E - 18 EUROPEAN CARP

Description - Reddish brown on back to silvery below. Grows to a length of 30 inches. It has a barb on each side of the mouth.

Similar Species - Other members of the minnow family, Goldfish and Daces.

Habitat - Shallow waters.

Feeding Habits - Eat all types of plant and animal material.

Economic Status - Used for bait in crawfish traps.

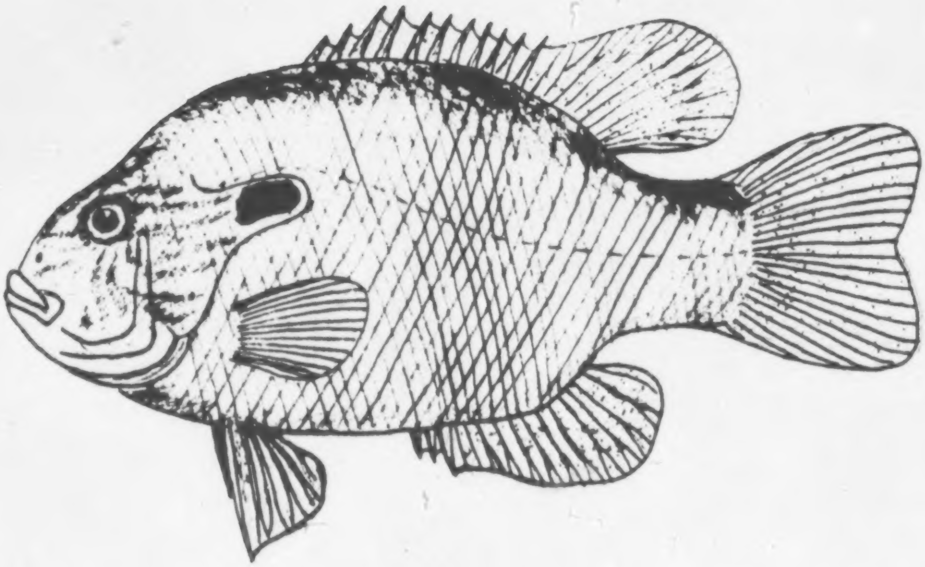


FIGURE E - 19

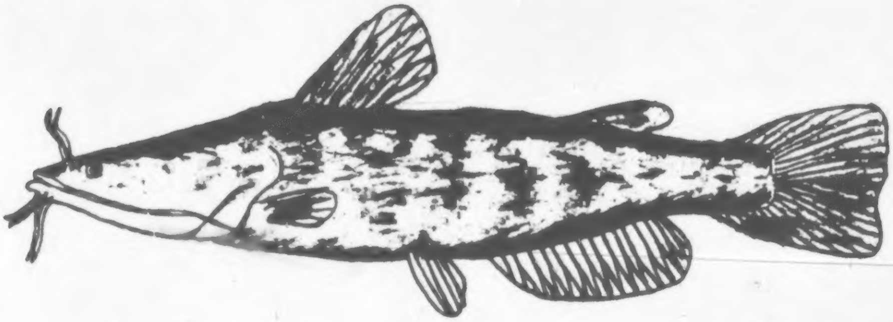


FIGURE E - 20

FIGURE E - 19 LONGEAR SUNFISH

Description - Brightly colored with orange spots and blue streaks; lobe above the ear usually is very long and may or may not have a bluish colored margin. It grows to a length of about 8 inches.

Similar Species - Other Sunfish, Largemouth Bass, Smallmouth Bass, and Black Bass.

Habitat - Warmer lakes and streams.

Feeding Habits - Mostly small animals.

Economic Status - Pan fish (small game fish), also food for larger fish.

FIGURE E - 20 FLATHEAD CATFISH

Description - Yellowish brown above, pale gray below and often mottled on the sides, with a scaleless body. May reach a weight of over 100 pounds.

Similar Species - White Catfish, Channel Catfish, Bullheads, Stonecat and Madtoms.

Habitat - Rviers and bayous.

Feeding Habits - Eats almost any type of plant and animal materials.

Economic Status - Commercial fish.

INSECT FLASH CARDS AND INFORMATION

KEY

INSECTS FLASH CARDS

FIGURE F - 01	Buffalo-Gnat
FIGURE F - 02	Snout-Beetle (Low-tide Pillbug)
FIGURE F - 03	Southern Green Stink Bug
FIGURE F - 04	Six-Spotted Tiger Geetle
FIGURE F - 05	Salt Marsh Mosquito
FIGURE F - 06	House Fly
FIGURE F - 07	Dog Flea
FIGURE F - 08	Black Carpenter Ant
FIGURE F - 09	Big Green Darner (Dragonfly)
FIGURE F - 10	Bessybug Beetle
FIGURE F - 11	Periodical Cicada
FIGURE F - 12	Buffalo Treehopper
FIGURE F - 13	European Earwig
FIGURE F - 14	Common Termite
FIGURE F - 15	Common Walkingstick
FIGURE F - 16	Carolina Mantid
FIGURE F - 17	Northern Mole Cricket
FIGURE F - 18	Common Field Cricket
FIGURE F - 19	Common Silverfish
FIGURE F - 20	American Roach

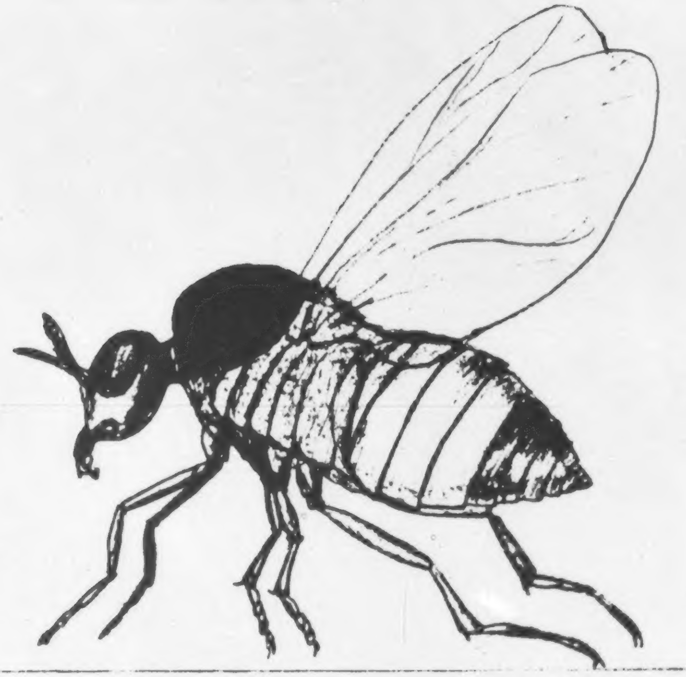


FIGURE F - 01

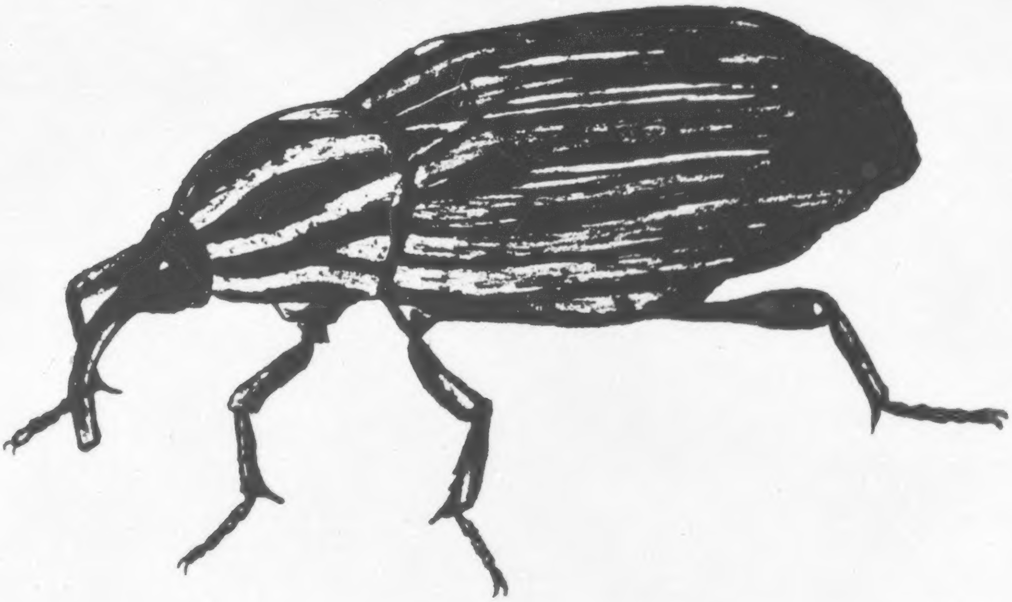


FIGURE F - 02

FIGURE F - 01 BUFFALO - GNAT

Description - Wings broad, their front veins heavy, the others weak; antennae shorter than the thorax. Coloration black, the base of the abdomen lighter. They are small and humpbacked.

Similar Species - Other members of the Gnat family.

Habitat - Damp areas near ponds and streams.

Feeding Habits - Suck blood from birds, mammals and man.

Economic Status - Whenever these become too abundant they may bite various farm animals to death.

FIGURE F - 02 SNOUT - BEETLE (LOW - TIDE PILLBUG)

Description - The mouth parts are situated at the end of a beak which usually curves downward. They are mostly dull-colored - gray, brown, or black - and are hard-bodied.

Similar Species - Other members of the Beetle family.

Habitat - Grain fields, storage bins.

Feeding Habits - Feed on or in plants, stored cereals and cereal products.

Economic Status - Cause extremely heavy losses to stored cereals.

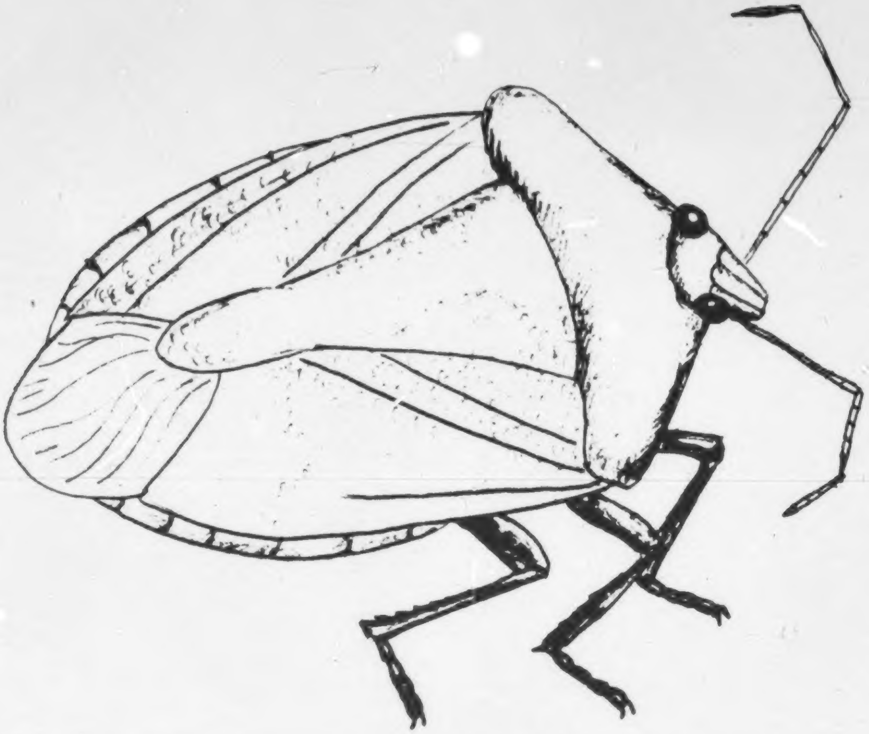


FIGURE F - 03

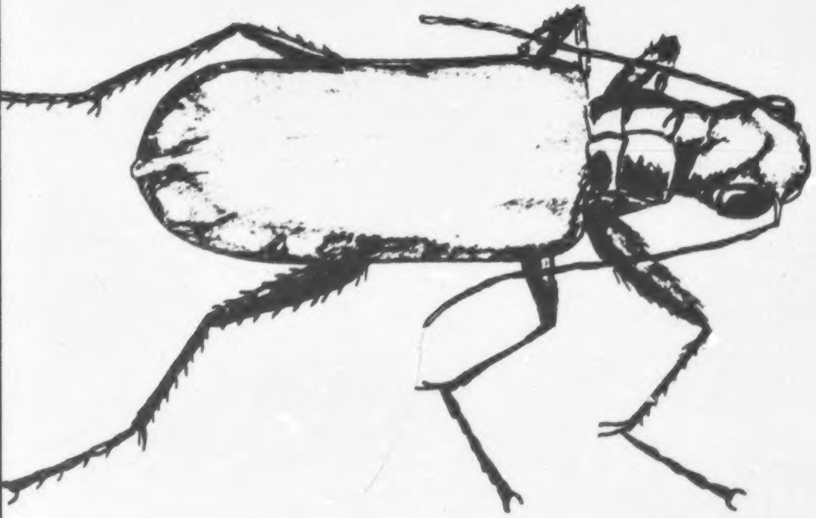


FIGURE F - 04

FIGURE F - 03 SOUTHERN GREEN STINK BUG

Description - Bodies are triangular, pointed behind; usually flattened, shield shaped. Coloration bright green with orange spots.

Similar Species - Ground Bug, Shield Bug and Harlequin Bug.

Habitat - Fields and gardens.

Feeding Habits - Feed on cultivated crops.

Economic Status - A pest to tomato, okra and other vegetables. Serve as food for birds.

FIGURE F - 04 SIX - SPOTTED TIGER BEETLE

Description - Coloration varies from brilliant green to blue with from 0 to 5 white dots on each fore wing. Antennae curve backward.

Similar Species - Tiger Beetle.

Habitat - Woods and sand bars.

Feeding Habits - Feed on other insects.

Economic Status - Help in controlling insect populations.

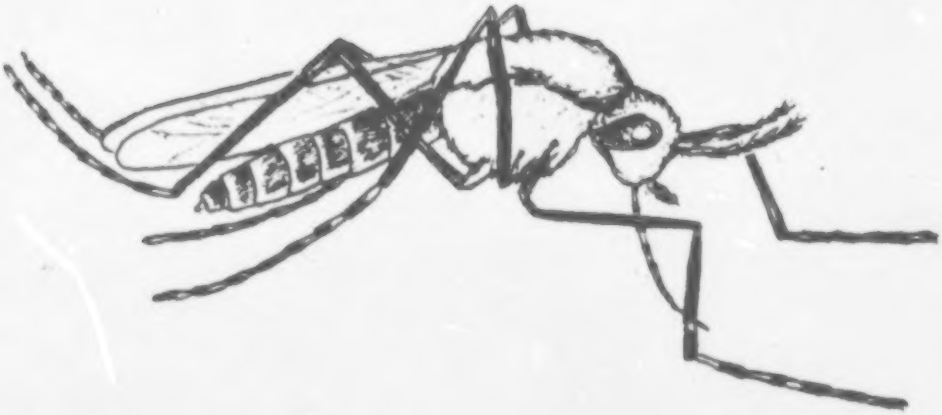


FIGURE F - 05

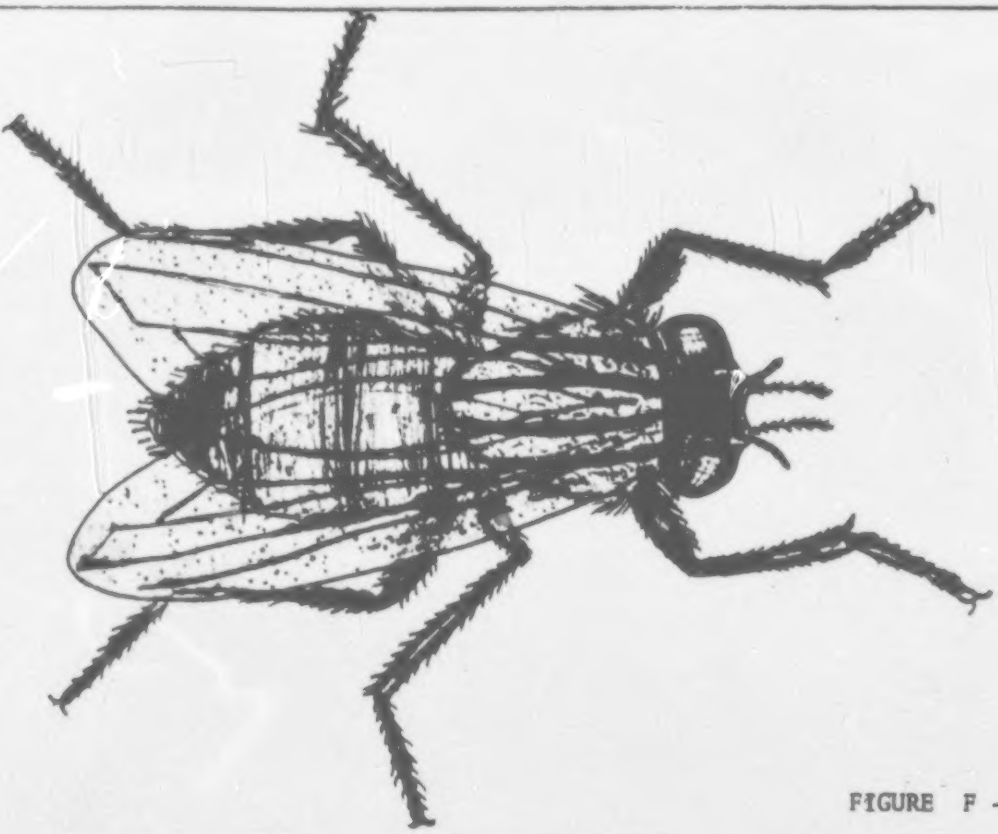


FIGURE F - 06

FIGURE F - 05 SALT MARSH MOSQUITO

Description - Small or very small, long-legged insects, usually with some scales on legs and body. The females have piercing-sucking mouth parts and suck blood, the males do not. Wings are narrow and folded flat across the back when resting.

Similar Species - Other mosquitoes and members of the fly family.

Habitat - Salt marshes along the Atlantic and Gulf coasts.

Feeding Habits - Females feed on blood of warm-blooded animals. Males feed on plant juices.

Economic Status - A major pest however, they do not carry disease organisms. Food for larger animals.

FIGURE F - 06 HOUSE FLY

Description - A nearly average-sized fly which is short-bodied with a relatively large, bristly thorax and a wide head with large eyes. It has two transparent wings.

Similar Species - Stable Flies and other flies.

Habitat - Found all over the world around homes and garbage dumps.

Feeding Habits - Feeds on just about anything.

Economic Status - They are second only to mosquitoes as pests to man. They are capable of transmitting various diseases to man. Food for larger animals.

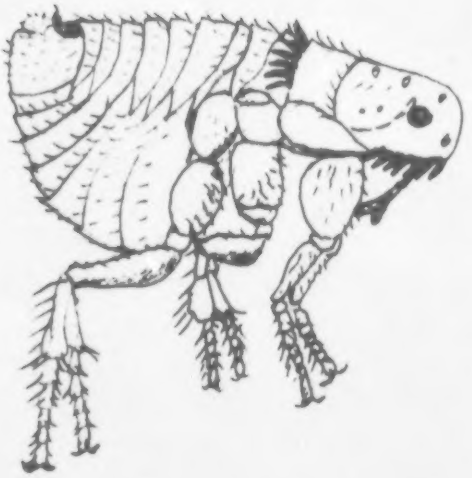


FIGURE F - 07

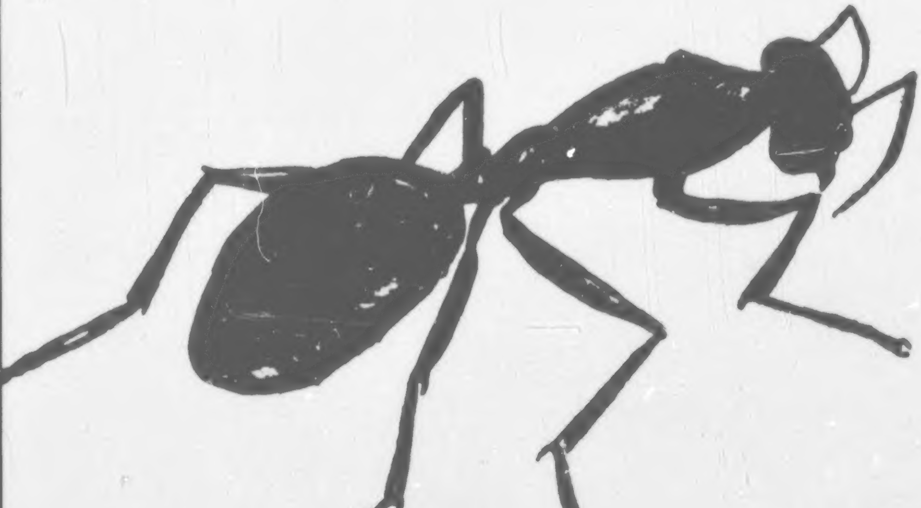


FIGURE F - 08

FIGURE F - 07 DOG FLEA

Description - Long powerful legs and claws. They are very small and exceedingly narrow-bodied and wingless and have piercing-sucking mouth parts.

Similar Species - Other members of the Flea family.

Habitat - On Dogs, Cats, and Gray Foxes.

Feeding Habits - Suck blood of their hosts.

Economic Status - Control is costly to pet owners.

FIGURE F - 08 BLACK CARPENTER ANT

Description - Our largest ant. Elbowed antennae, small "waist", and large abdomen, wingless.

Similar Species - Other members of the Ant family.

Habitat - Dead trees, logs, fence posts, utility poles, and the timbers of buildings.

Feeding Habits - Feed on insect eggs and larvae and sometimes enter homes in search of sweet foods.

Economic Status - They are often quite destructive to wooden structures. Food for larger animals. Help in controlling insect populations.

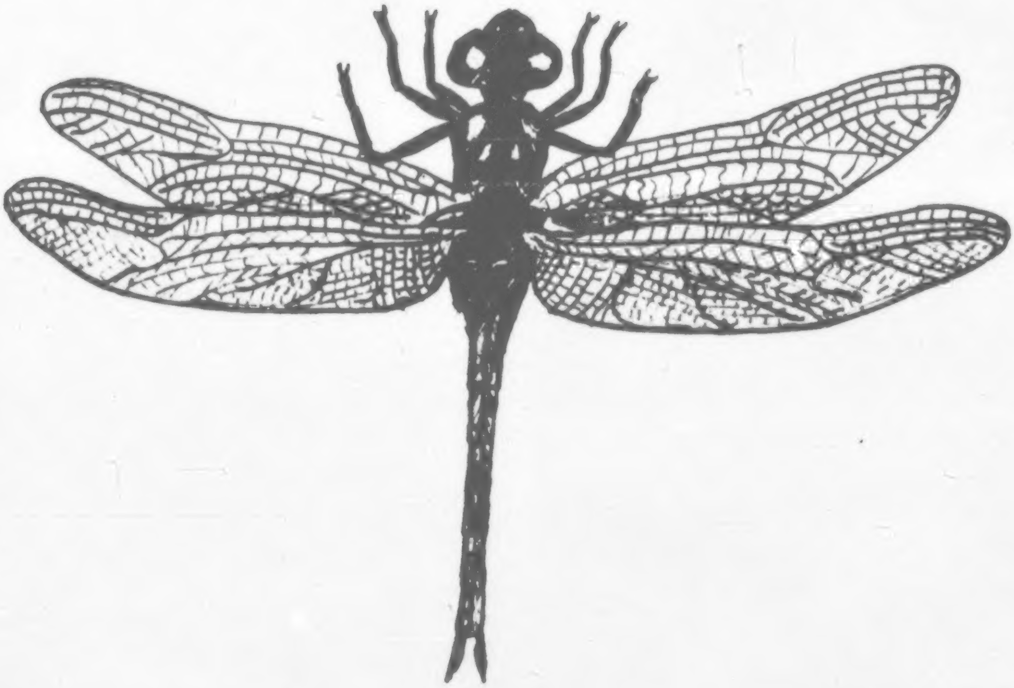


FIGURE F - 09

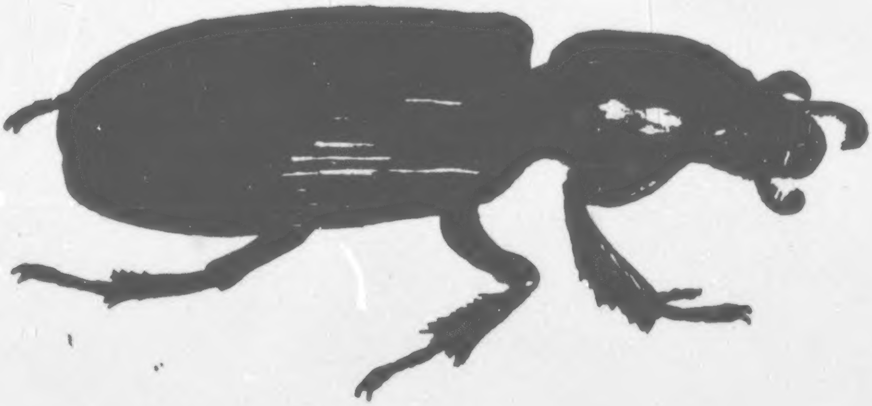


FIGURE F - 10

FIGURE F - 09 BIG GREEN DARNER (DRAGONFLY)

Description - A large dragonfly with enormous eyes, two pairs of strong transparent green wings and long, large green bodies.

Similar Species - Other dragonflies.

Habitat - Close to ponds, lakes and streams.

Feeding Habits - Feed on mosquitoes and honey bees.

Economic Status - Control mosquitoes and can endanger bee hives. Food for birds.

FIGURE F - 10 BESSYBUG BEETLE

Description - Shiny black with a short horn bent forward on the top of the head.

Similar Species - None.

Habitat - Decaying wood.

Feeding Habits - Feed on decayed wood.

Economic Status - Food for wildlife.

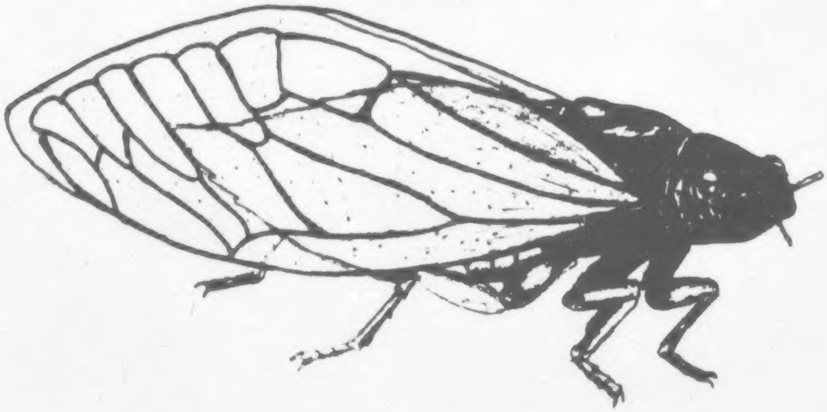


FIGURE F - 11

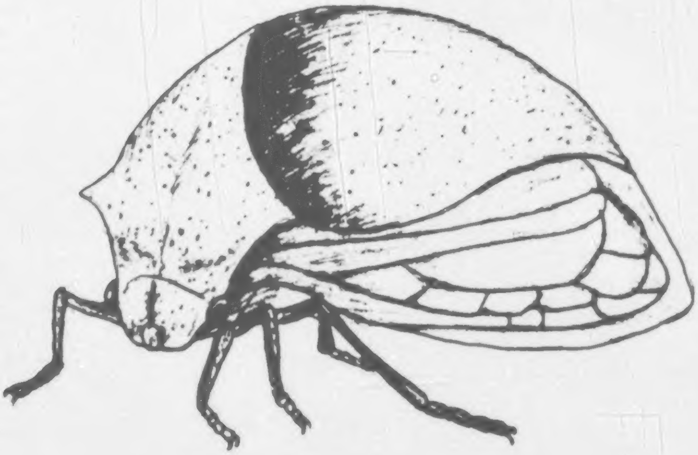


FIGURE F - 12

FIGURE F - 11 PERIODICAL CICADA

Description - Head, thorax, and abdomen mostly black; veins of wings and some markings on body orange brown; eyes red; broad head and clear wings.

Similar Species - None.

Habitat - Commonly found in broad-leaved trees.

Feeding Habits - Feed on roots of plants.

Economic Status - May damage forest, shade, and orchard trees. Eaten by many species of birds.

FIGURE F - 12 BUFFALO TREEHOPPER

Description - Brown in color, shaped like small thorns.

Similar Species - Other Treehoppers.

Habitat - Orchards.

Feeding Habits - Feed on leaves of trees.

Economic Status - A pest of apple, pear, cherry, and other fruit and shade trees.

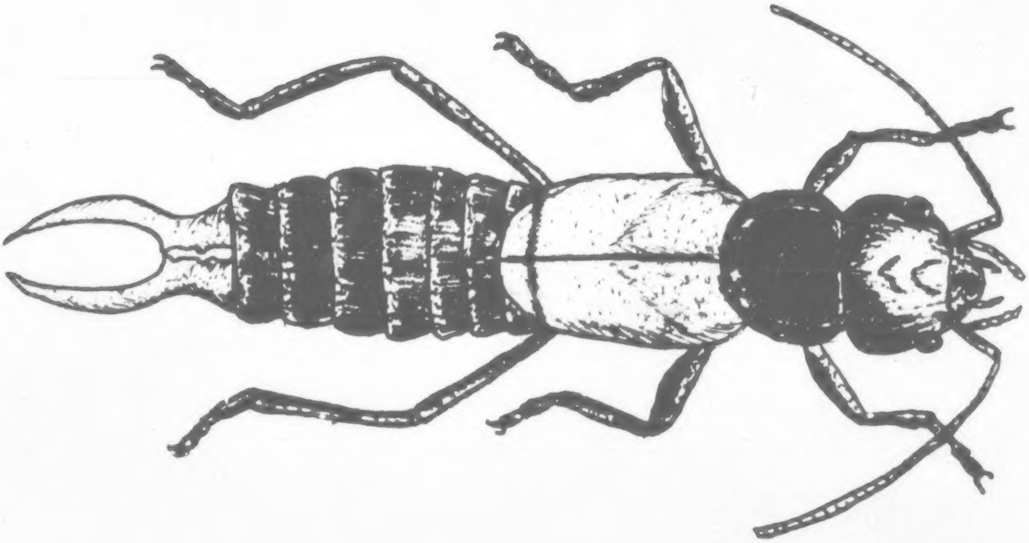


FIGURE F - 13

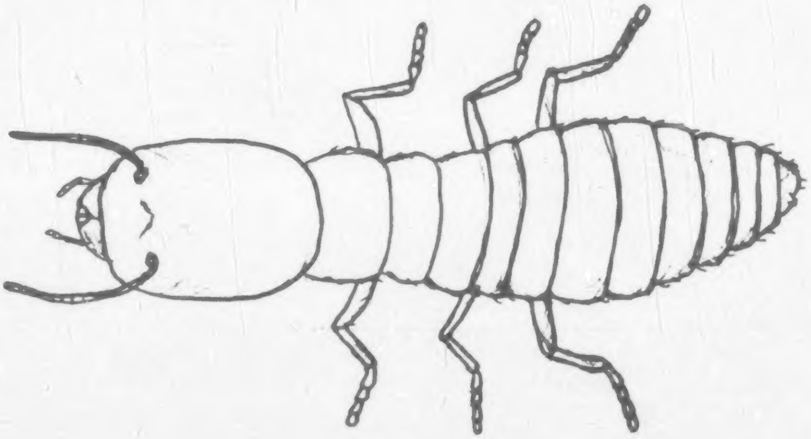


FIGURE F - 14

FIGURE F - 13 EUROPEAN EARWIG

Description - Easily recognized by the forcep-like tail appendages and short fore wings that do not nearly cover the abdomen. The hind wing when spread is seen to be shaped like a human ear.

Similar Species - Other Earwigs.

Habitat - Garbage dumps and in damp situations in and around homes.

Feeding Habits - Eat mostly dead animals but may eat insect larvae, snails and other slow-moving animals, and flowers and ripe fruit.

Economic Status - Control insect population to some extent. A household pest.

FIGURE F - 14 COMMON TERMITE

Description - The workers which are most destructive are often miscalled "white ants". Their bodies are quite soft and the thorax and abdomen is joined very broadly as distinguished from the "waist" as there is in all ants.

Similar Species - Other members of the termite family.

Habitat - Dead trees, fence posts, wooden portions of a house, etc.

Feeding Habits - They contain protozoa within their bodies which digest the wood which they digest in turn.

Economic Status - The most destructive insect to human dwellings. Eaten by birds when swarming.

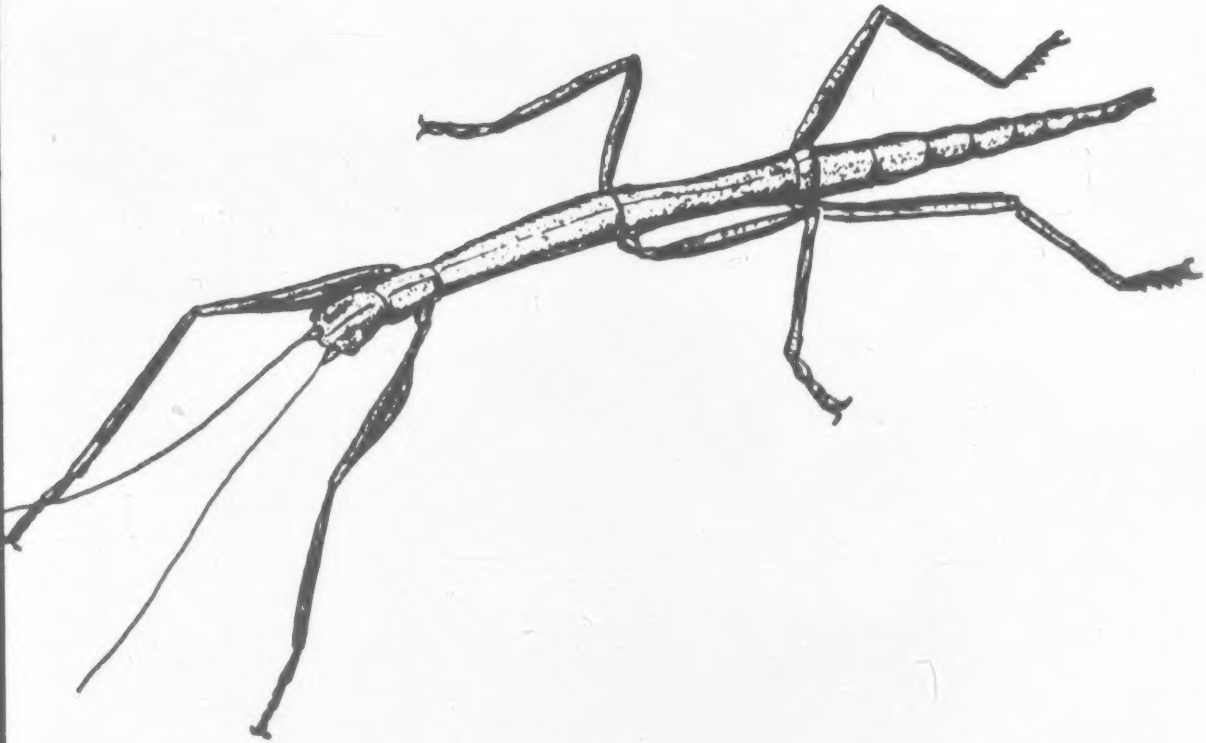


FIGURE F - 15

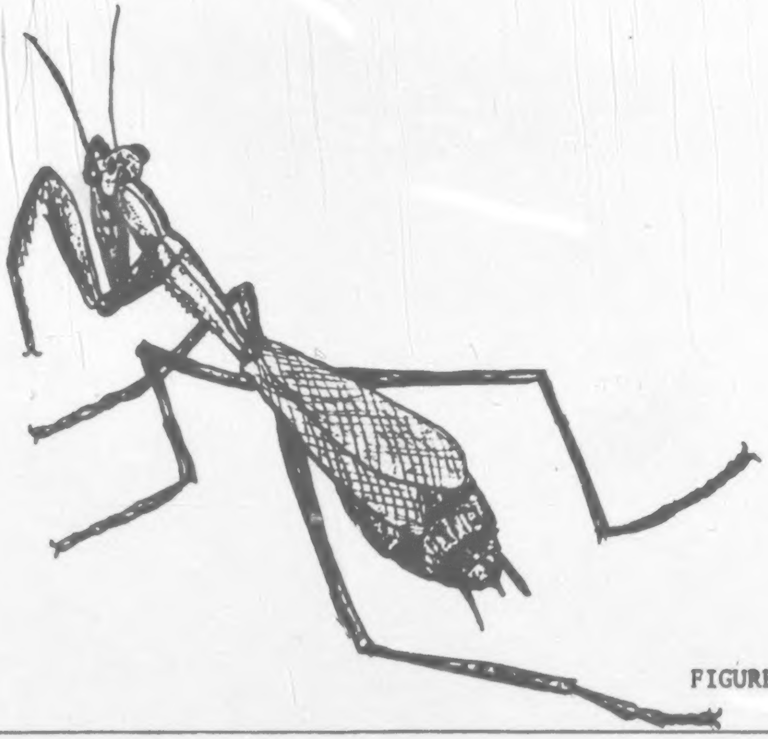


FIGURE F - 16

FIGURE F - 15 COMMON WALKINGSTICK

Description - Looks like a twig with legs and is gray to green in color, usually yellowing with age. Eyes are small, antennae are long and so are its legs and body.

Similar Species - Other Walkingsticks.

Habitat - Trees, bushes and grasses.

Feeding Habits - Feed on leaves and grass.

Economic Status - Eaten by several species of birds and various lizards and rodents.

FIGURE F - 16 CAROLINA MANTID

Description - Large leng slow-moving insect with fore legs fitted for catching and holding its prey, small triangular head, long slender thorax and large abdomen. They have two wings.

Similar Species - Other Mantids.

Habitat - Bushes and flower gardens.

Feeding Habits - Feed on almost any type of insect they can capture.

Economic Status - Control of insect populations.

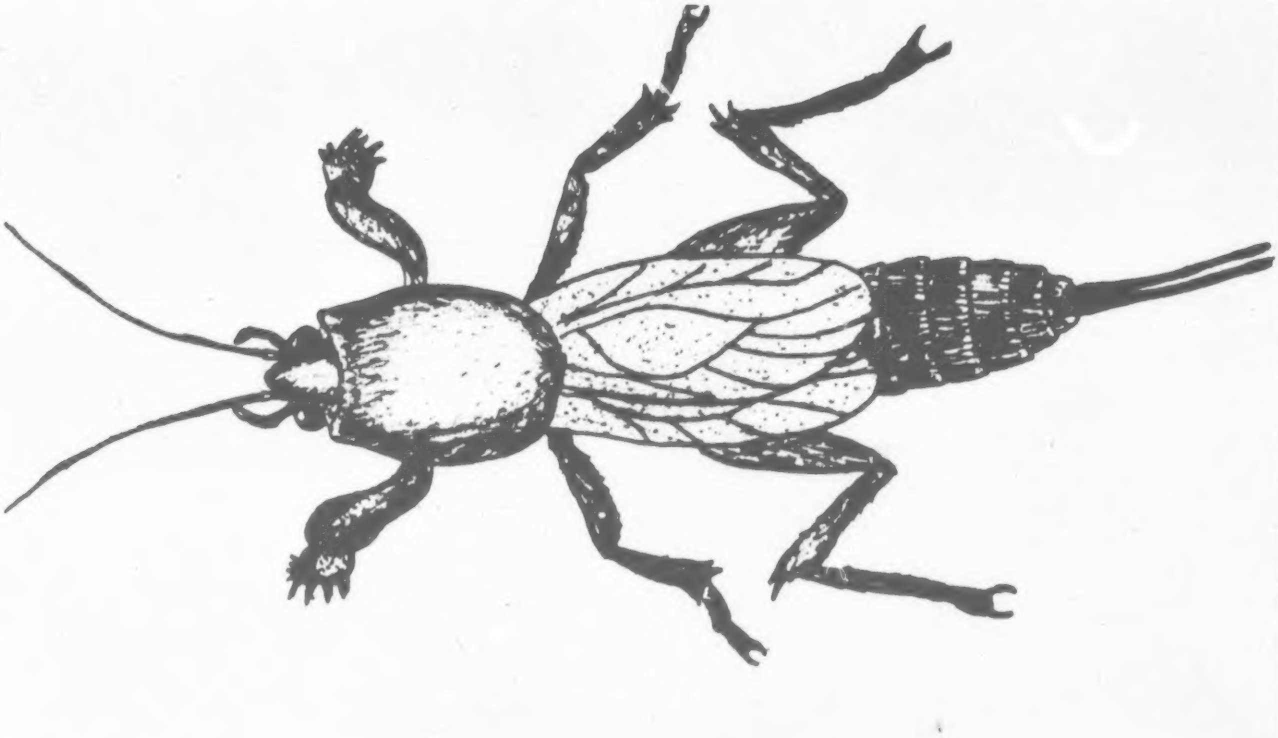


FIGURE F - 17

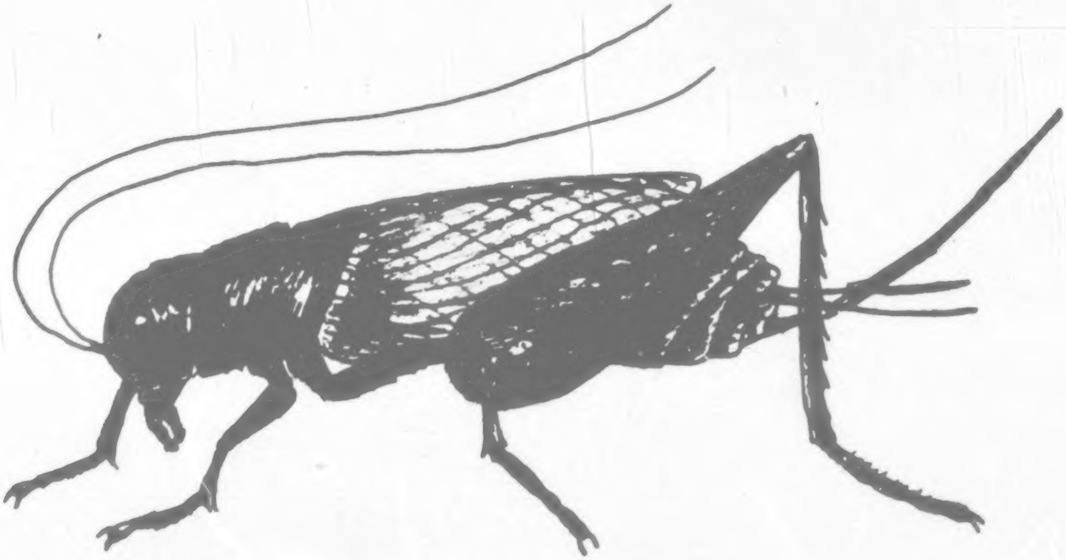


FIGURE F - 18

FIGURE F - 17 NORTHERN MOLE CRICKET (CHIEN DE TERRE)

Description - Resemble moles as nearly as an insect can. It has a narrow body covered with fine, short hairs which make it appear furry. The fore legs are short, wide, shovel-shaped for digging. Two sets of wings, the fore wings being very short and the hind wings used for flying.

Similar Species - Other Mole Crickets.

Habitat - Damp heavy soils.

Feeding Habits - Feed on seedling plants below the soil surface, such as turnips, peanuts, potatoes and grass.

Economic Status - Very destructive to seedling plants.

FIGURE F - 18 COMMON FIELD CRICKET

Description - Large-headed, almost parallel-sided, and more cylindrical than flattened. The antennae are long and thread-like, often longer than the body. Hind legs are very well developed.

Similar Species - Other Crickets.-

Habitat - Gardens and fields.

Feeding Habtis - Feed on plant leaves and occasionally eat other insects.

Economic Status - Occasionally are extremely damaging to grain and garden crops. Excellent fish bait.

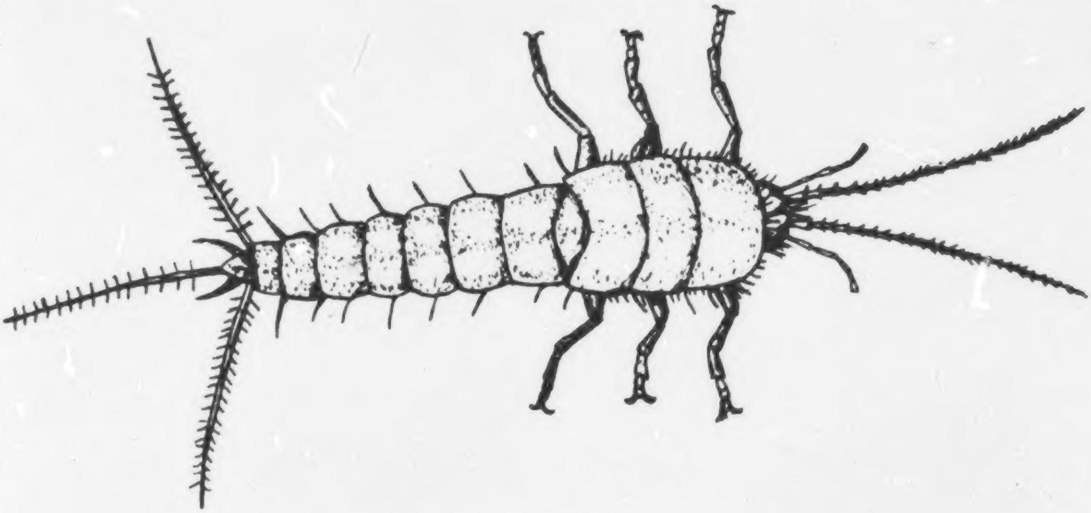


FIGURE F - 19

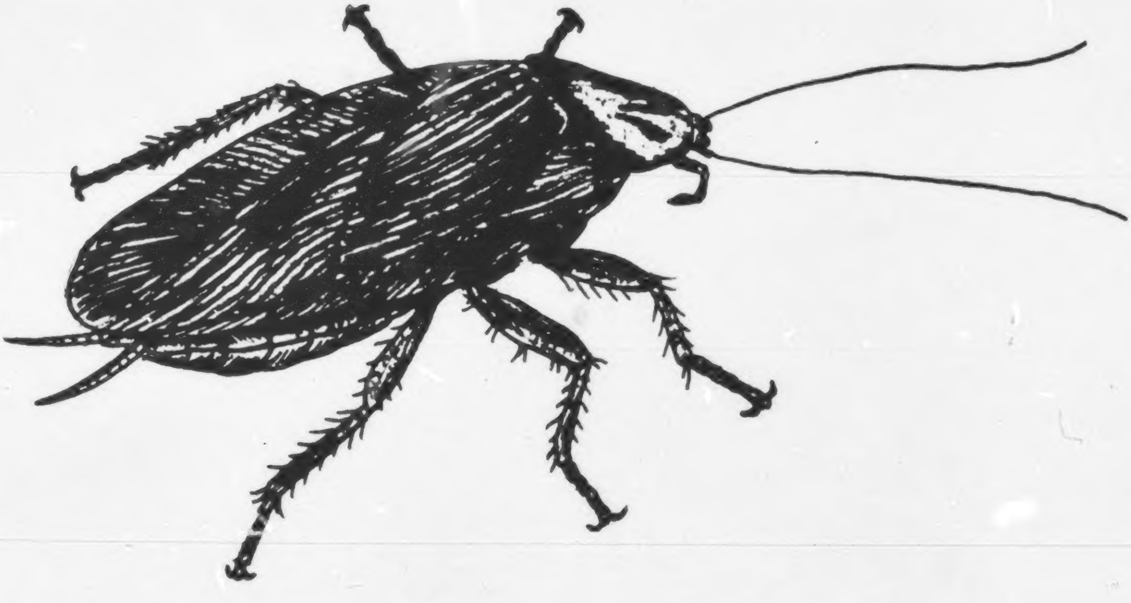


FIGURE F - 20

FIGURE F - 19 COMMON SILVERFISH

Description - Small wingless insect with three long conspicuous bristles at the end of its body and very long, segmented antennae. The entire body is usually covered with very small silvery scales.

Similar Species - Other Silverfish.

Habitat - Basements and dark cracks in houses.

Feeding Habits - Feed on pastes, glues, sizing, and starch.

Economic Status - Destructive to books, wallpaper and fabrics.

FIGURE F - 20 AMERICAN ROACH

Description - Flat-bodied, long slender, tapering antennae, two pairs of wings; the fore pair, leathery and pigmented with shades of brown or yellow are folded flat across the back and long spiny legs.

Similar Species - Other Roaches.

Habitat - Garbage dumps and in homes in cracks, cupboards and between walls.

Feeding Habits - Feed on unprotected food or garbage.

Economic Status - They are problems in homes, restaurants and foodstores.

MAMMALS FLASH CARDS AND INFORMATION

KEY
MAMMALS FLASH CARDS

FIGURE B - 01	Nutria
FIGURE B - 02	White-footed Mouse
FIGURE B - 03	Mink
FIGURE B - 04	River Otter
FIGURE B - 05	Armadillo
FIGURE B - 06	Eastern Cottontail
FIGURE B - 07	Muskrat
FIGURE B - 08	Red Fox
FIGURE B - 09	Eastern Fox Squirrel
FIGURE B - 10	Raccoon
FIGURE B - 11	Striped Skunk
FIGURE B - 12	Opossum
FIGURE B - 13	Eastern Mole
FIGURE B - 14	Black Bear
FIGURE B - 15	Least Shrew
FIGURE B - 16	Southern Flying Squirrel
FIGURE B - 17	Bobcat
FIGURE B - 18	Beaver
FIGURE B - 19	Whitetail Deer
FIGURE B - 20	Norway Rat

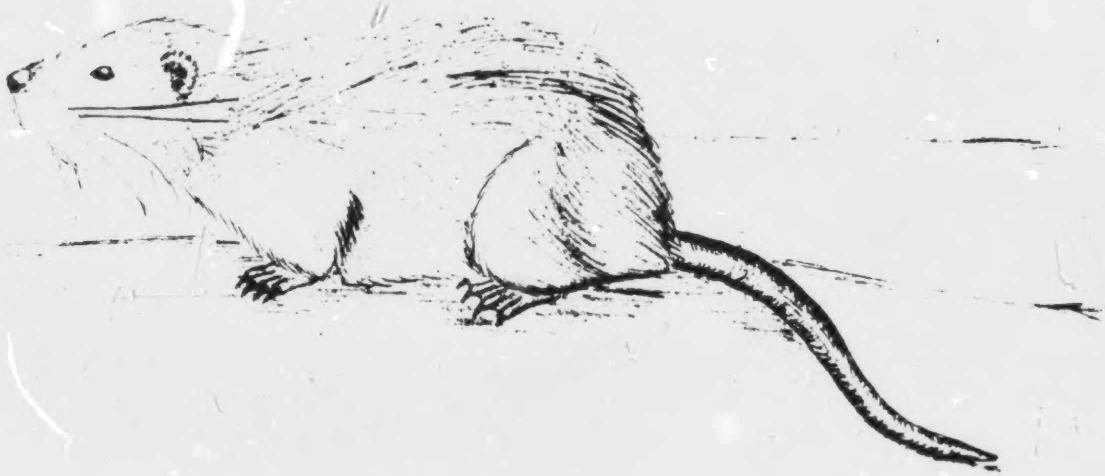


FIGURE B - 01

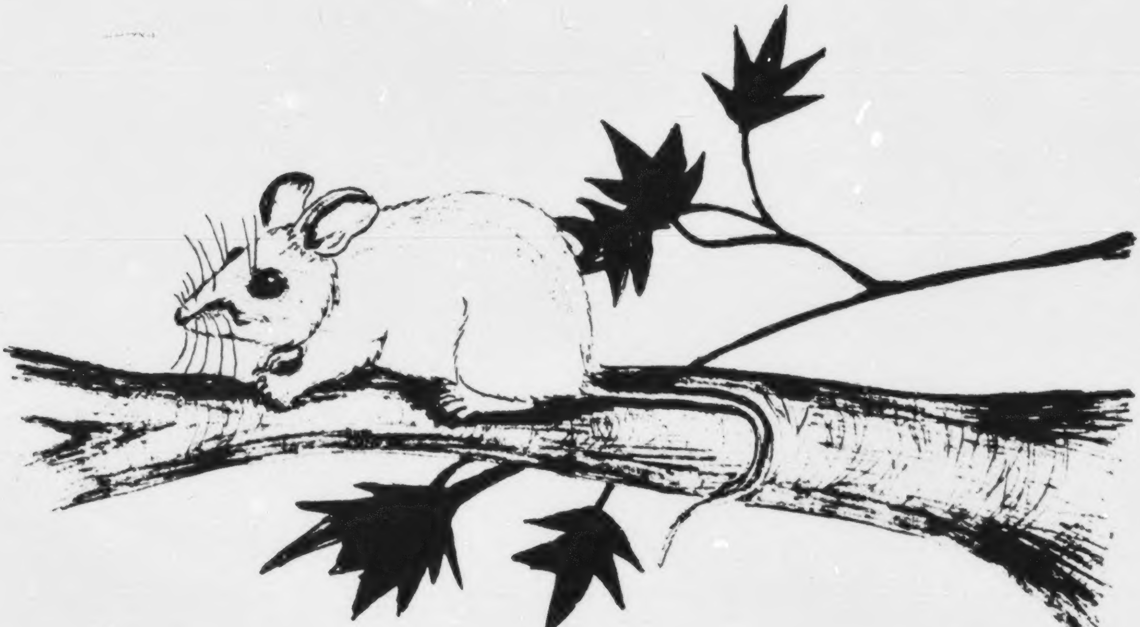


FIGURE B - 02

FIGURE B - 01 NUTRIA:

Description - A large grayish-brown rodent with a long, round, scantily haired tail. Hind feet are webbed.

Similar Species - Beaver, Muskrat, Opossum.

Habitat - Marshes, swamps, ponds, and lakes.

Feeding Habits - Feeds on nearly every kind of aquatic plant available.

Economic Status - The fur is of little value.

FIGURE B - 02 WHITE-FOOTED MOUSE:

Description - Medium-sized mouse having white feet, usually white belly and some shade of brown or reddish yellow back. Tail is as long as head and body.

Similar Species - Grasshopper Mouse, Harvest Mouse, Rice Rat, House Mouse.

Habitat - Woods, prairies, rocks, and occasionally around buildings. Some nest in trees, but most are ground dwellers.

Feeding Habits - Feeds on seeds and insects.

Economic Status - Neutral.

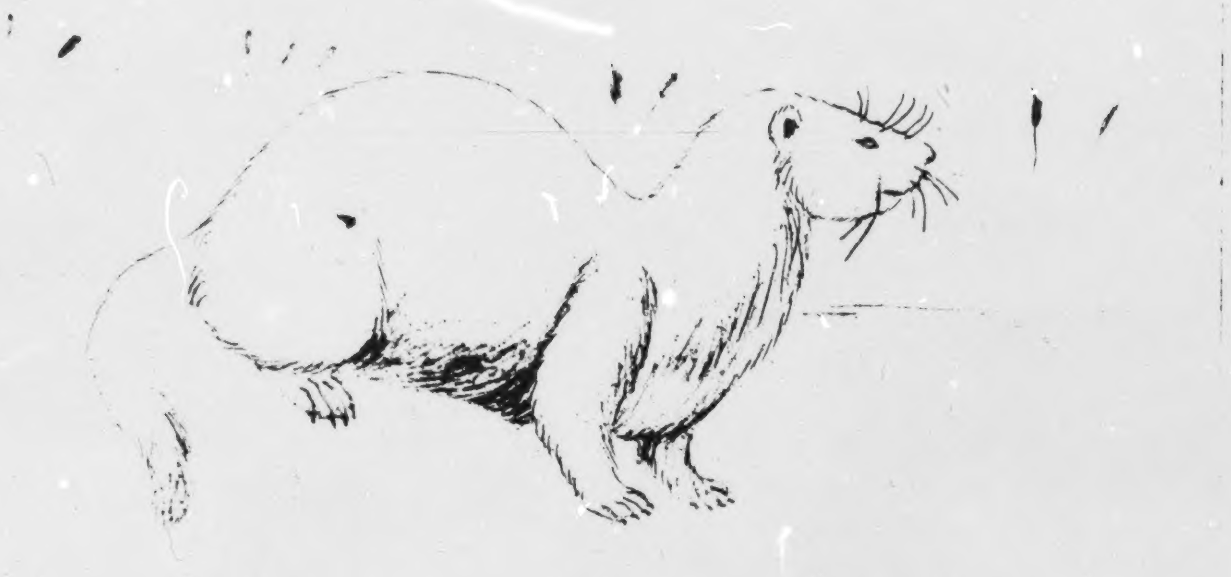


FIGURE B - 03

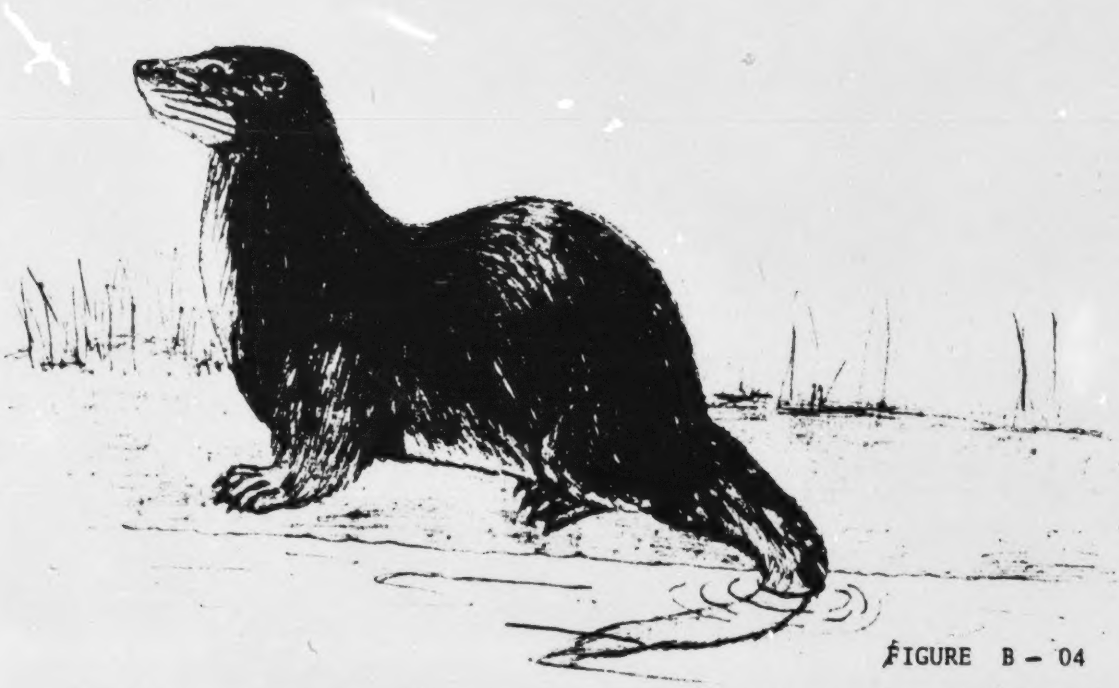


FIGURE B - 04

FIGURE B - 03 MINK:

Description - Usually rich dark brown with a white chin patch, and sometimes with scattered small white spots on the belly. Tail is slightly bushy.

Similar Species - Weasel, Marter, River Otter.

Habitat - Along streams and lakes.

Feeding Habits - Primarily small mammals, birds, eggs, frogs, crawfish and fish.

Economic Status - A most valuable fur animal, although they sometimes raid chicken yards.

FIGURE B - 04 RIVER OTTER:

Description - Large weasel-like mammal, rich brown above, with a silvery sheen below. It has small ears and a broad snout. The feet are webbed and the tail is thick at the base tapering toward the tip.

Similar Species - Beaver, Mink, Sea Otter.

Habitat - Along streams and lake borders.

Feeding Habits - Eats fish, frogs, crawfish and other aquatic invertibrates.

Economic Status - Valuable fur. Eats some trout but mostly rough fish.

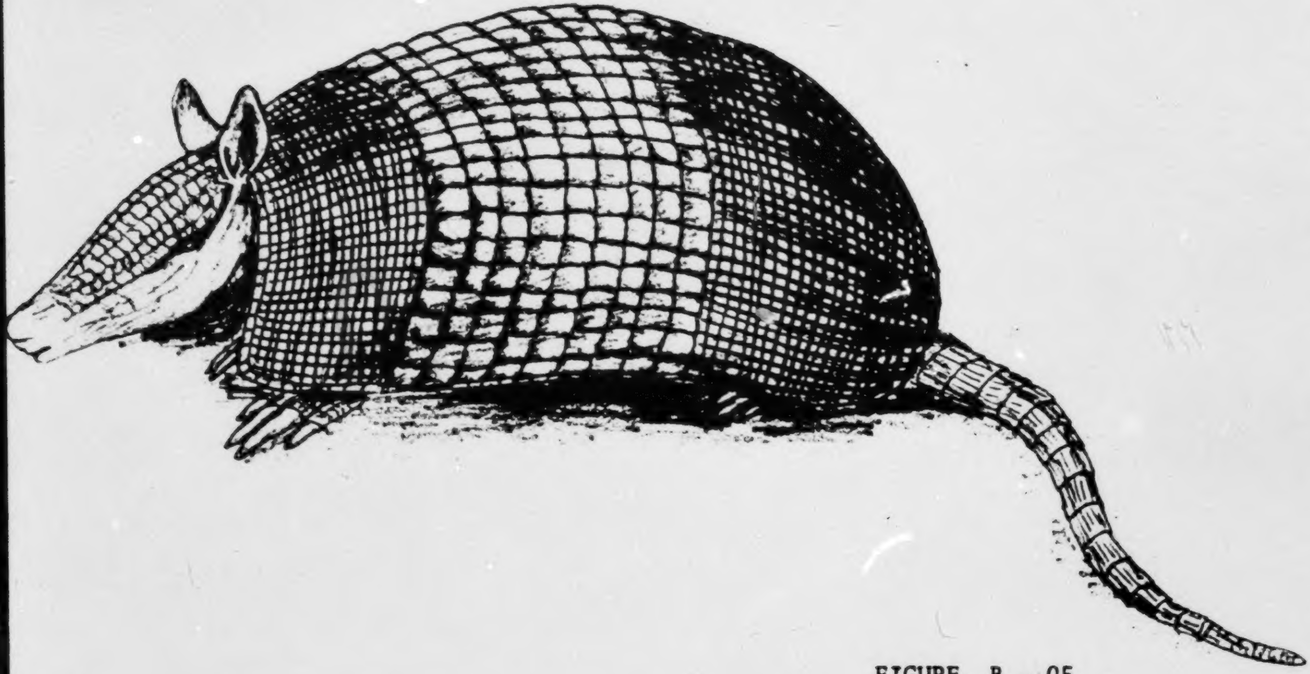


FIGURE B - 05

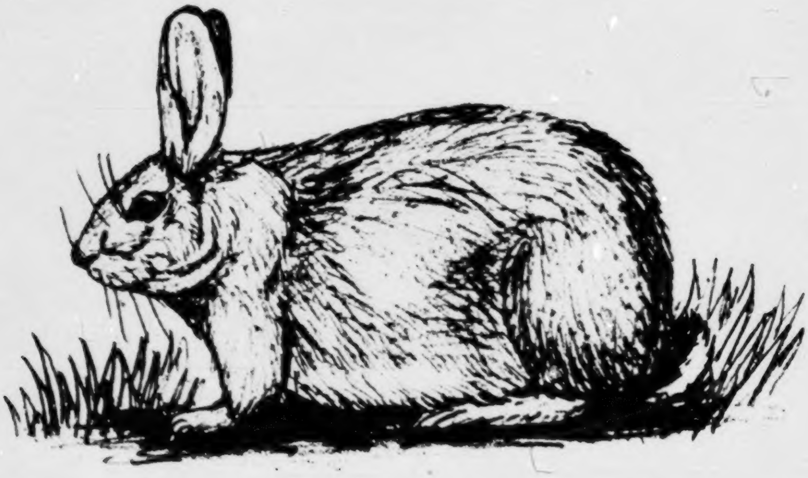


FIGURE B - 06

FIGURE B - 05 ARMADILLO:

Description - A peculiar "armored" mammal about the size of a house cat. Top of the head, body and tail are covered with a horny armor plate material.

Similiar Species - None

Habitat - Woodlands, brushy areas, rocky outcrops and cliffs.

Feeding Habits - Eats a few berries, fruits and bird eggs, but it feeds almost entirely on insects and other small invertibrates. Also, it eats roots in leaf mold for much of its food.

Economic Status - Destroys many insects, meat is edible, baskets are made from its shell and their burrows serve as homes for other mammals.

FIGURE B - 06 EASTERN COTTONTAIL:

Description - Body is brownish or grayish, the tail is cottony white, nape patch is rusty, feet are whitish.

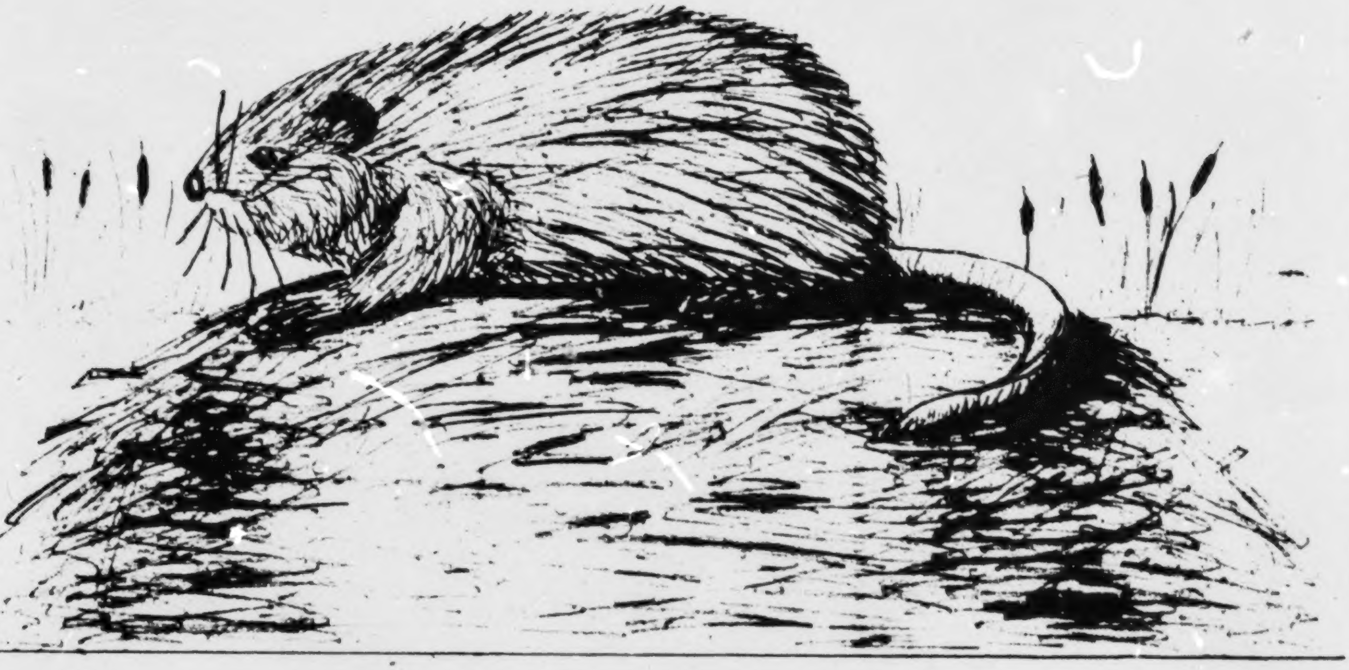
Similar Species - Desert Cottontail, New England Cottontail, Swamp Rabbit, Marsh Rabbits, Snowshoe Hare and Jackrabbit.

Habitat - Heavy brush, strips of forest with open areas nearby, edges of swamps and weed patches.

Feeding Habits - Feeds on green vegetation in summer, bark and twigs in winter.

Economic Status - Important for small game hunting. Can cause considerable damage to shrubs, small trees and gardens.

FIGURE B - 07



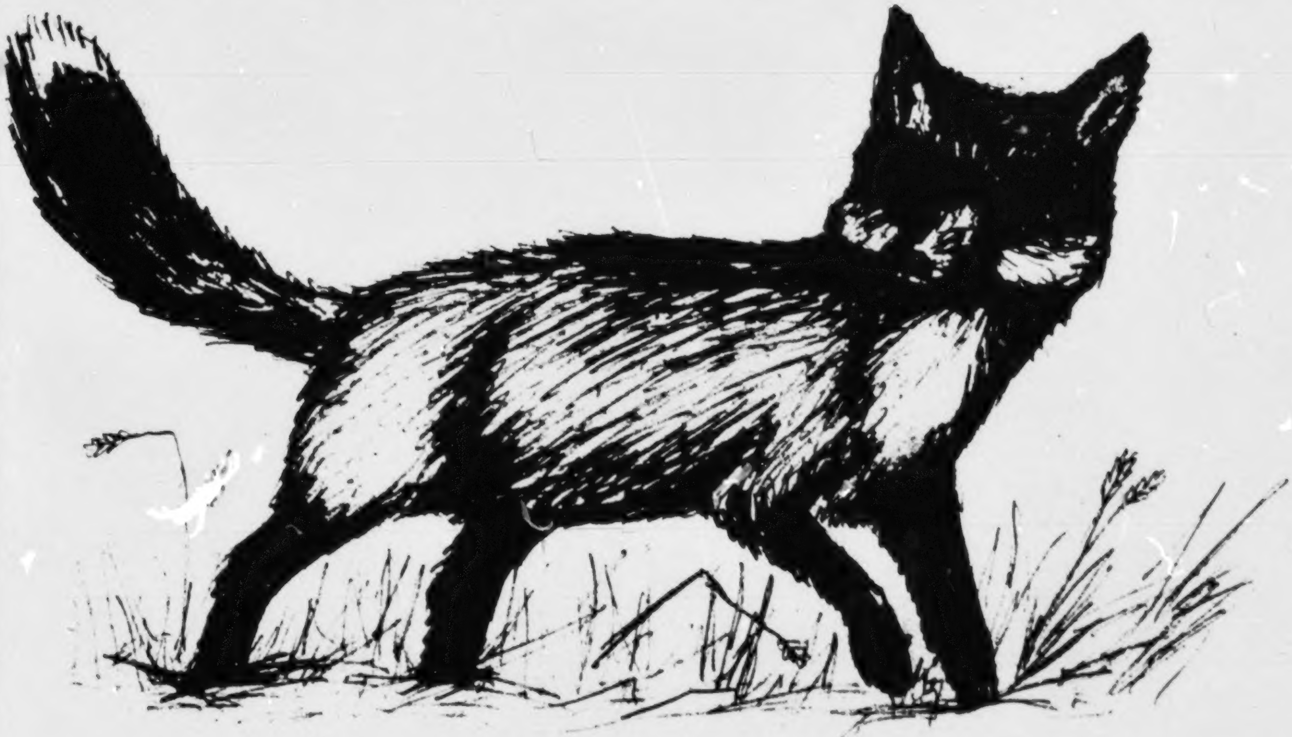


FIGURE B - 08

FIGURE B - 07 MUSKRAT

Description - Fur is dense, rich brown, overlaid with coarse guard hairs, belly is silvery, and the tail is long, scaly, naked and black.

Similar Species - None

Habitat - Marshes, edges of ponds, lakes and streams.

Feeding Habits - Feeds on aquatic vegetation, also clams, frogs, and fish on occassion.

Economic Status - A most valuable fur animal. May cause some damage to levees by burrowing.

FIGURE B - 08 RED FOX

Description - Has the appearance of a small dog, normally reddish yellow with the darkest area being the back, the belly is white, the tail is bushy mixed with black hairs and tipped with white, the legs and feet are black.

Similar Species - Coyote, Swift Fox, Kit Fox, Gray Fox, Marten, Fisher and Arctic Fox.

Habitat - Mixture of forest and open country preferred.

Feeding Habits - Food consists of available animals ranging in size from insect to rabbit, also eats berries and other fruits.

Economic Status - To most hunters it is considered harmful. To most farmers it is considered helpful.

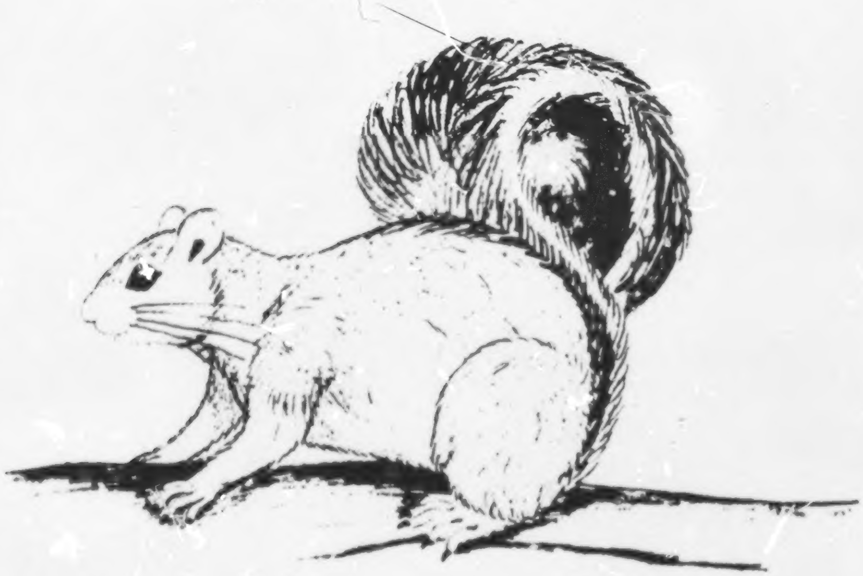


FIGURE B - 09

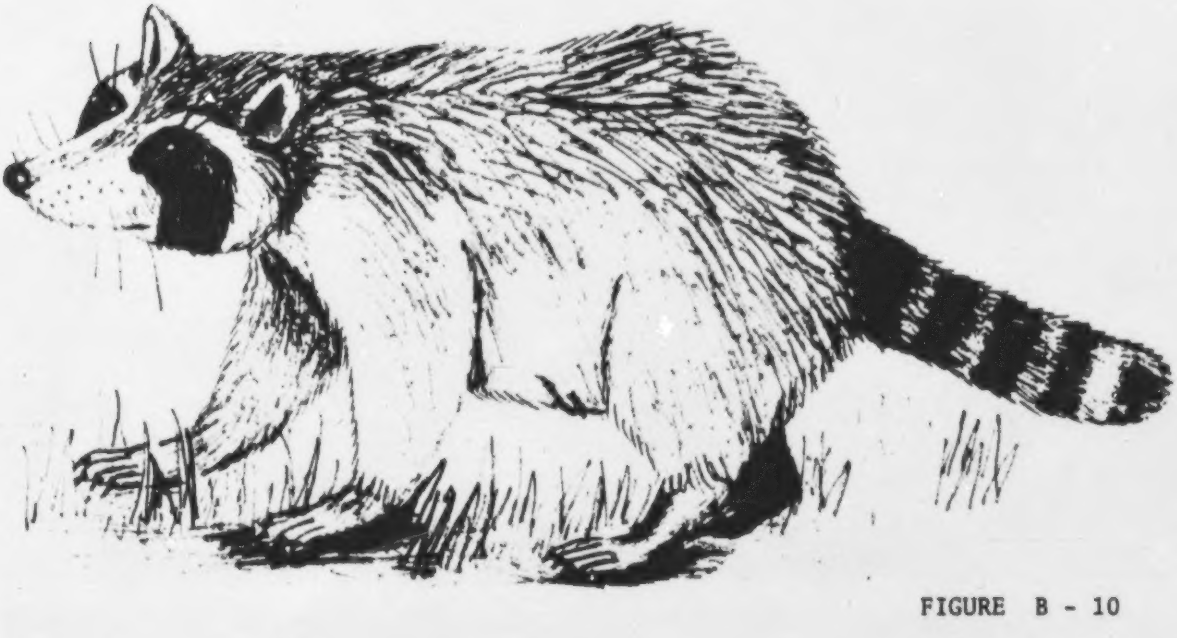


FIGURE B - 10

FIGURE B - 09 EASTERN FOX SQUIRREL

Description - Rusty yellowish with a pale yellow to orange belly, with a bushy tail bordered with deep reddish yellow tipped hairs.

Similar Species - Eastern Gray Squirrel, Western Gray Squirrel, Red Squirrel.

Habitat - Open hardwood lots in the north and pine forests in the south, both having clearings.

Feeding Habits - Feed on a great variety of nuts, acorns, seeds, fungi, bird eggs, and cambium beneath the bark of small branches of trees.

Economic Status - Important small game mammal.

FIGURE B - 10 RACCOON

Description - Body is pepper-and-salt mixture in color. It has a black mask over the eyes and the tail has alternating stripes of black and yellowish-white.

Similar Species - Ringtail and Coati

Habitat - Along streams and lakes where there are wooded areas or rock cliffs nearby.

Feeding Habits - Omnivorous (eats both plants and animals), eats fruits, nuts, grains, insects, frogs, crawfish, bird eggs and just about anything available.

Economic Status - May damage sweet corn and raid chicken yards. They eat crawfish out of ponds and nets and usually cause damage to the nets. The fur is valued by some and the meat is edible.

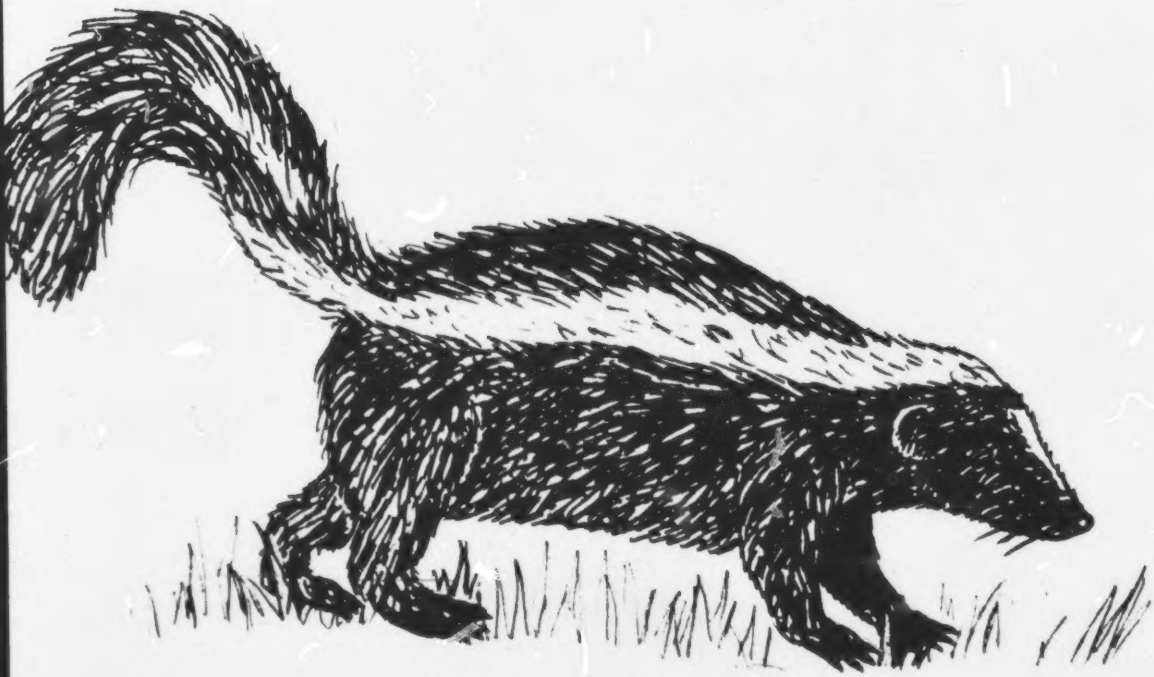


FIGURE B - 11

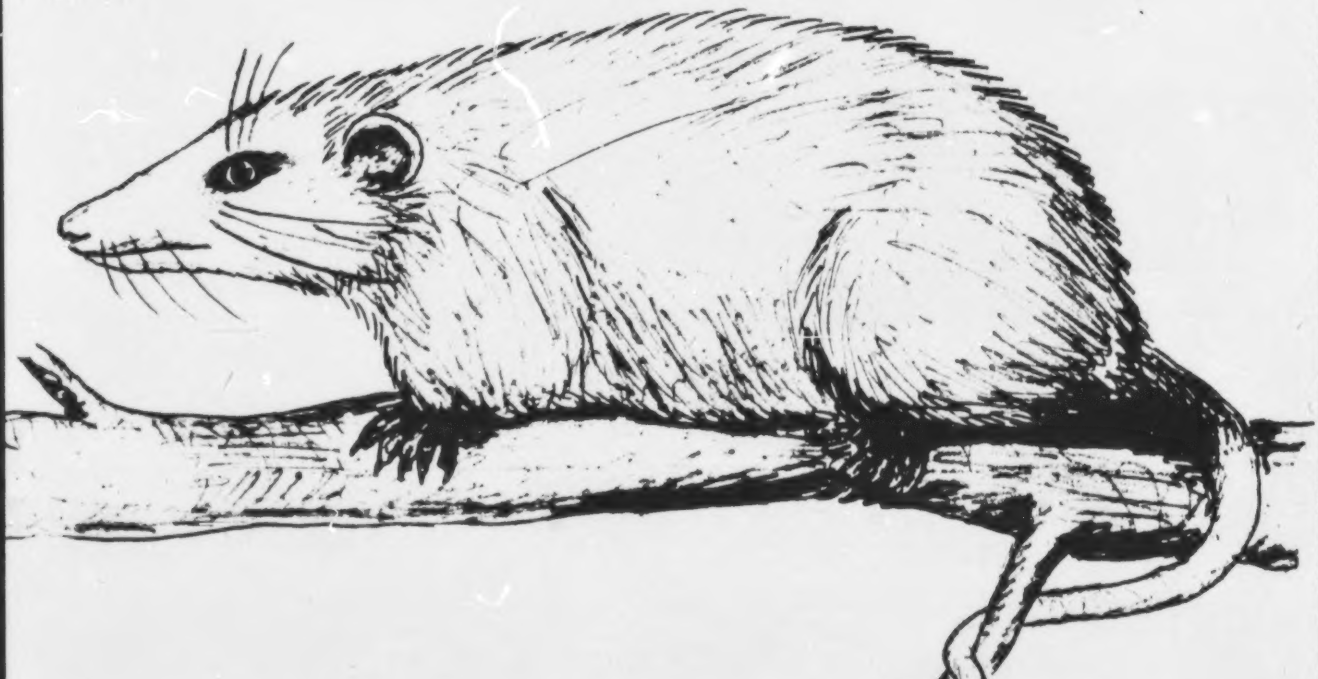


FIGURE B - 12

FIGURE B - 11 STRIPED SKUNK

Description - About the size of a house cat, it is recognized by its black body with a narrow white stripe over the forehead and a broad white stripe over the top middle section of the body.

Similar Species - Hooded Skunk and Hognose Skunk.

Habitat - Semi-open country, mixed wooods, brushland, and open prairie preferred, usually within two miles of water.

Feeding Habits - Omnivorous (eats both plants and animals), mice, eggs, insects, grubs, dead animals and berries.

Economic Status - One of our most valuable fur animals, single pelts are not very valuable but are so when tremendous numbers are taken. Rarely eats poultry, destroys many small rodents and insects. Makes a fair pet if de-scented.

FIGURE B - 12 OPOSSUM

Description - About the size of a house cat, but with a heavier body, shorter legs and a pointed nose. The face is white and the ears are black and paper thin often tipped white. The tail is rat-like and black next to the body and white on the end. It has a pouch in which to carry its young.

Similar Species - Nutria

Habitat - Farm areas preferred, also found in woodlands and along streams.

Feeding Habits - Fruits, vegetables, nuts, meat, eggs, insects and dead animals.

Economic Status - Hunted for sport, meat is edible. Destroys many mice and insects and occassionally raids chicken yards.

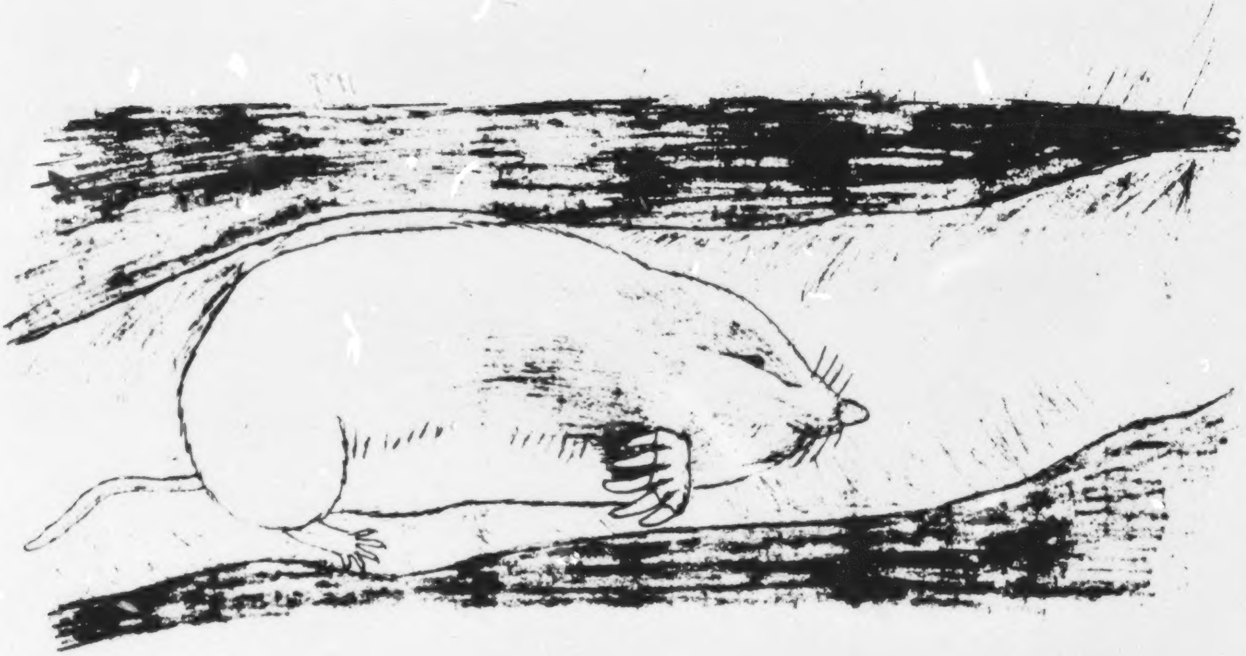


FIGURE B - 13

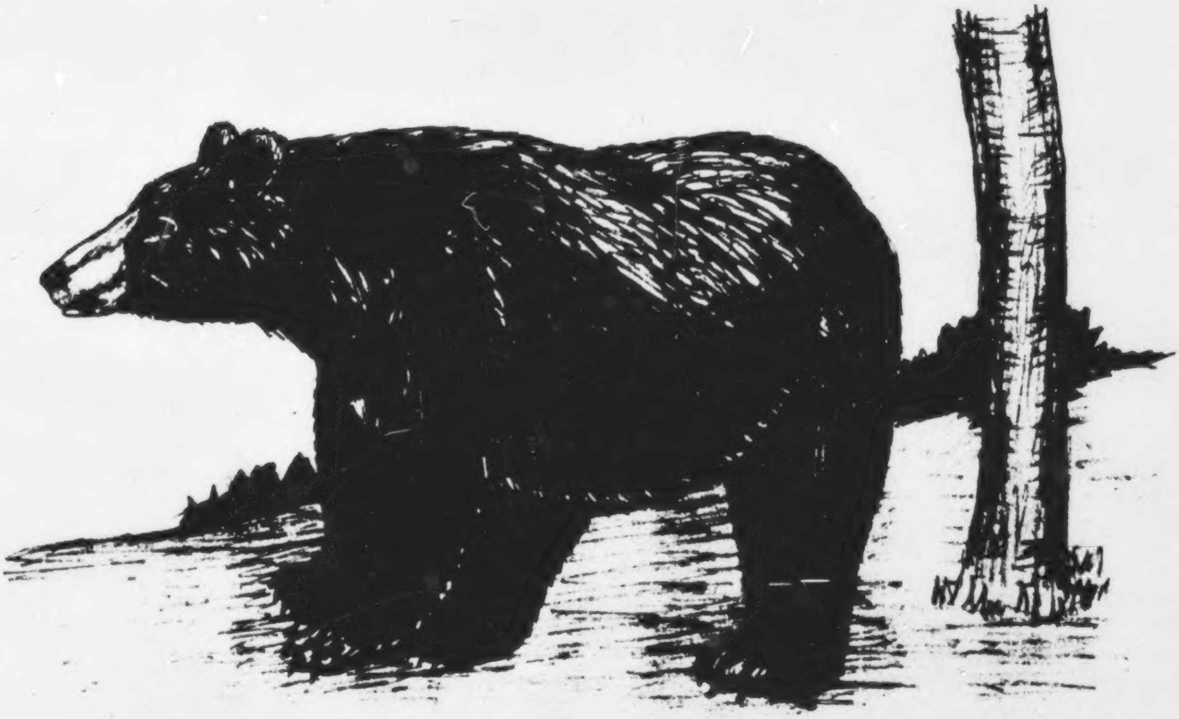


FIGURE B - 14

FIGURE B - 13 EASTERN MOLE

Description - The front feet are wider than they are long; the palms are turned outward. The snout is pointed and without hair on the end, the nostrils open upward. The tail is hairless, there are no external ears and the tiny eyes are covered with a thin skin. The fur is brown to golden in color.

Similar Species - Hairtail Mole and Starnose Mole.

Habitat - Prefers moist sandy loam such as lawns, golf courses, gardens, fields, and meadows. Avoids extremely dry soil.

Feeding Habits - Feeds on worms, insects and some vegetable matter.

Economic Status - Damages lawns and gardens, but destroys many insects. It also aerates uncultivated soil.

FIGURE B - 14 BLACK BEAR

Description - Color varies from black to cinnamon usually with a small patch of white on the breast. The head and body ranges 5 to 6 feet in height, and weight ranges 200 to 425+ pounds.

Similar Species - Grizzly and Big Brown Bear.

Habitat - Primarily forests and swamps.

Feeding Habits - Eats berries, nuts, tubers, insects, insect larvae, small mammals, eggs, honey, dead animals, and garbage.

Economic Status - An important game animal but it cannot be hunted in our state. They will occasionally attack calves and may cause damage to fruit trees which border forests and swamps.

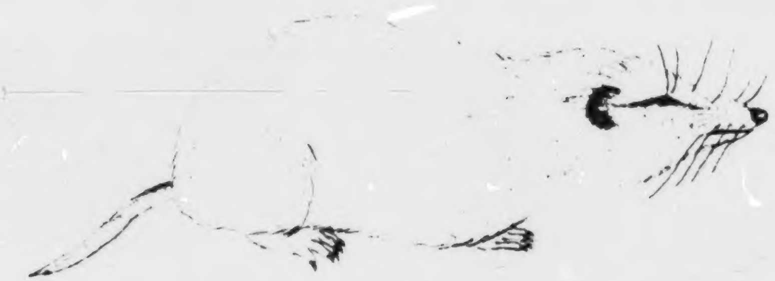


FIGURE B - 15

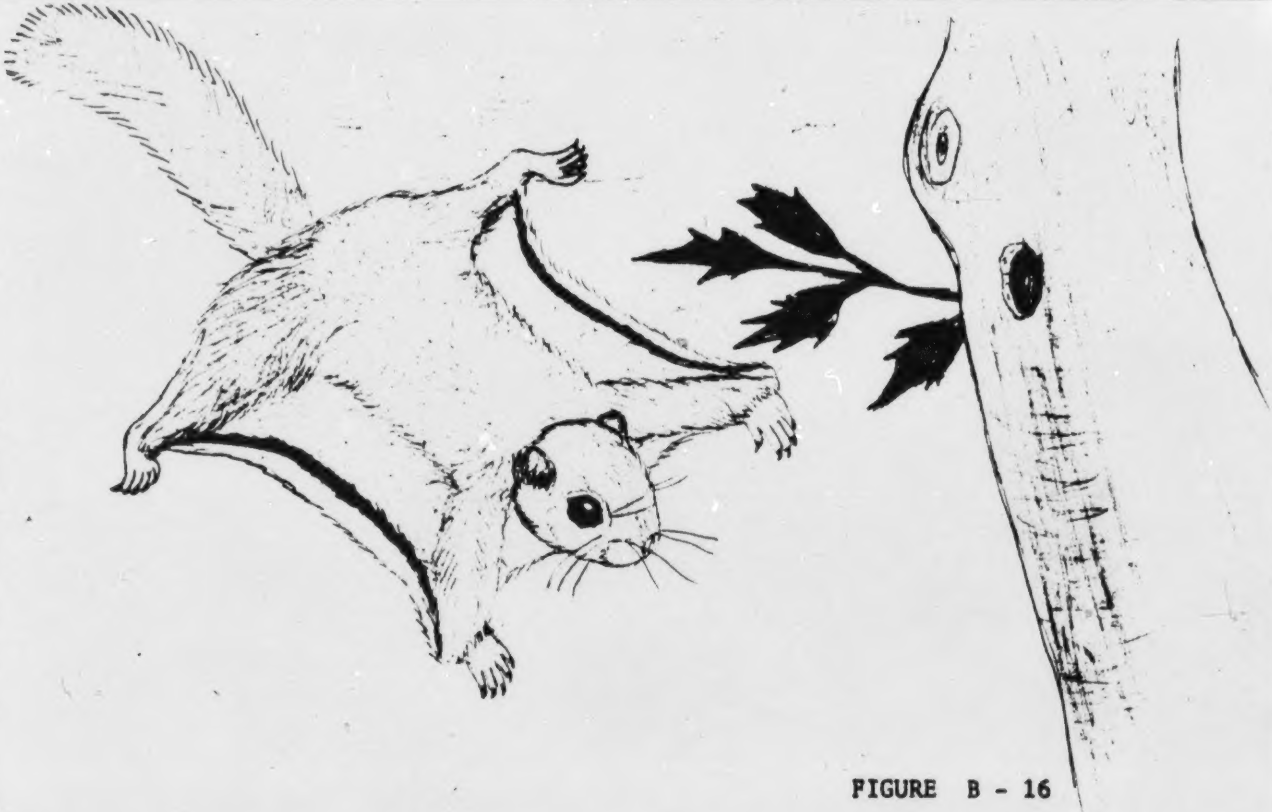


FIGURE B - 16

FIGURE B - 15 LEAST SHREW

Description - Mouse sized with beadlike eyes not covered with skin. Ears are concealed or nearly concealed by soft fur. It always has five toes on each foot. Cinnamon in color with a short tail.

Similar Species - Shorttail Shrew and other Shrews.

Habitat - Open grass - covered areas which may have scattered brush; also marshes.

Feeding Habits - Eats insects and other small animals, may eat more than its own weight in food each day.

Economic Status - None.

FIGURE B - 16 SOUTHERN FLYING SQUIRREL

Description - Thick soft fur is glossy olive-brown above, white to the skin below. A folded layer of loose skin along each side of the body, from front leg to hind leg. When outstretched, this skin supports the body as the animal glides from tree to tree.

Similar Species - Northern Flying Squirrel.

Habitat - Woodlots and forests deciduous or mixed deciduous-coniferous trees.

Feeding Habits - Feed on a variety of seeds, nuts, insects, bird eggs, and meat if available.

Economic Status - Does not interfere with man unless its home is in the attic of a house. Makes a good pet.

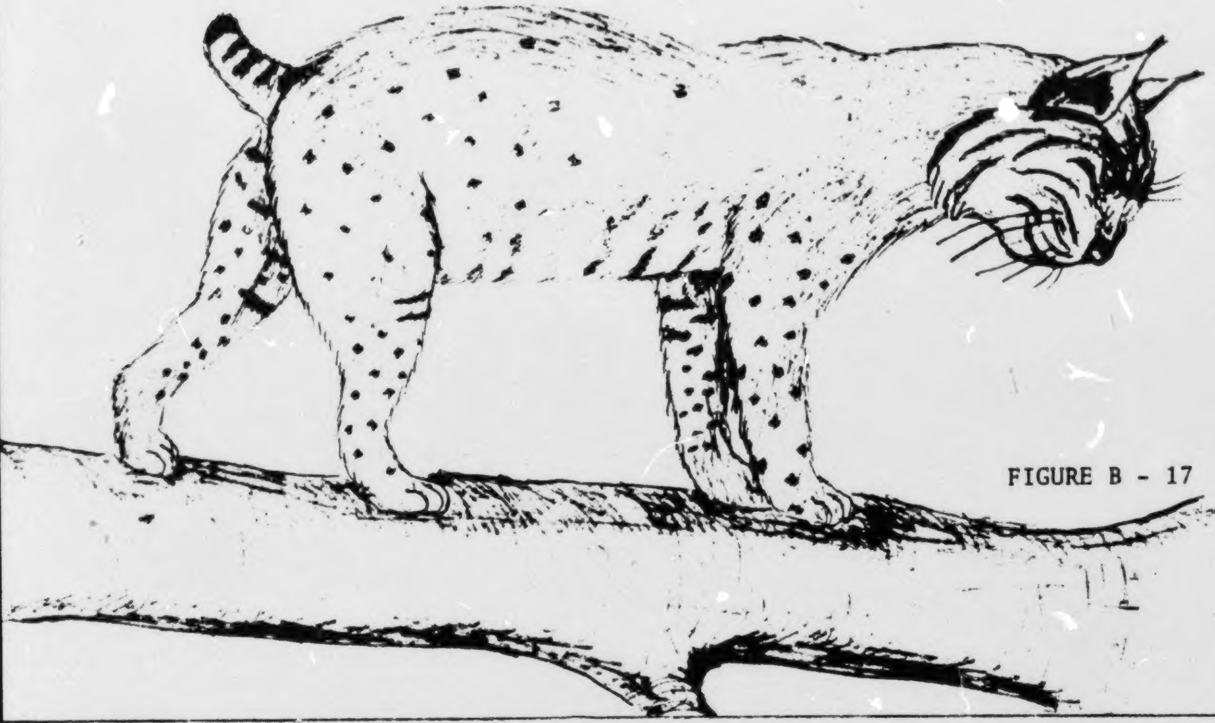


FIGURE B - 17

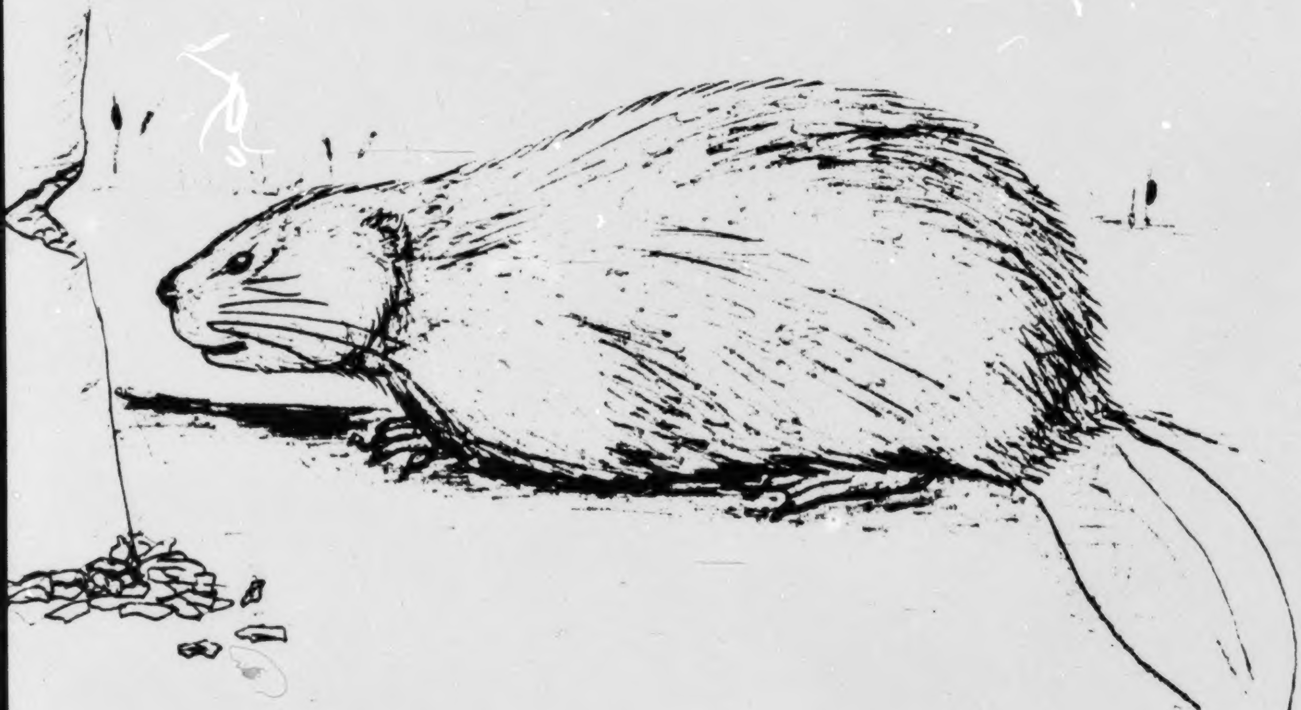


FIGURE B - 18

FIGURE B - 17 BOBCAT

Description - Has a short tail, black only on tip at the tip. Ear tufts are short and inconspicuous. Head and body 25 to 30 inches, tail 5 inches, weight 15 to 35 pounds.

Similar Species - Lynx and other cats.

Habitat - Swamps and forests.

Feeding Habits - Feeds on small mammals and birds; it will eat dead animals if meat is not spoiled.

Economic Status - Fur is of some value, probably beneficial, most hunters think otherwise.

FIGURE B - 18 BEAVER

Description - Rich brown color with a hairless, scaly tail shaped like a paddle. The front of the face is chest-nut colored and it has huge front teeth. The hind feet are webbed and the second claw is doubled.

Similar Species - River Otter, Muskrat, and Nutria.

Habitat - Streams and lakes with trees on banks.

Feeding Habits - The preferred food is aspen, poplar, birch, maple, willow and alder. It feeds on the bark and small twigs.

Economic Status - An important fur animal and water conservationist, meat is edible.

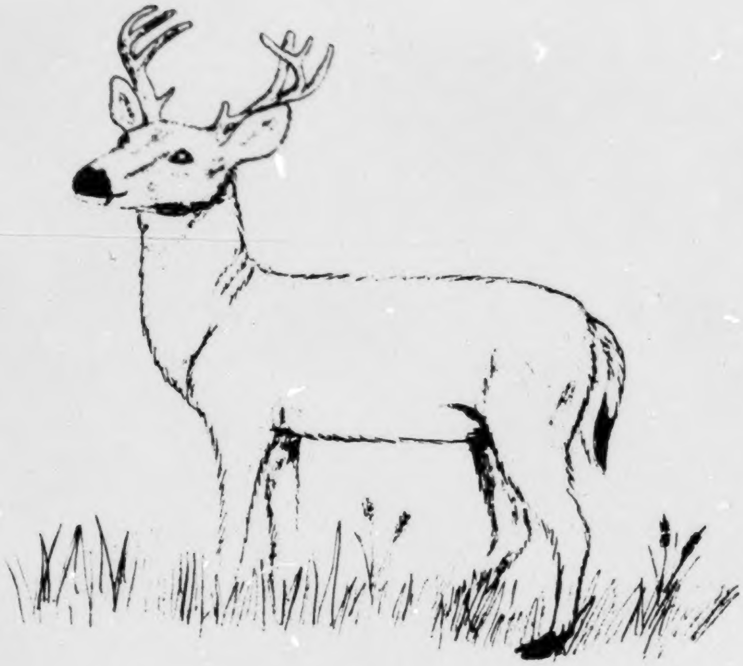


FIGURE B - 19

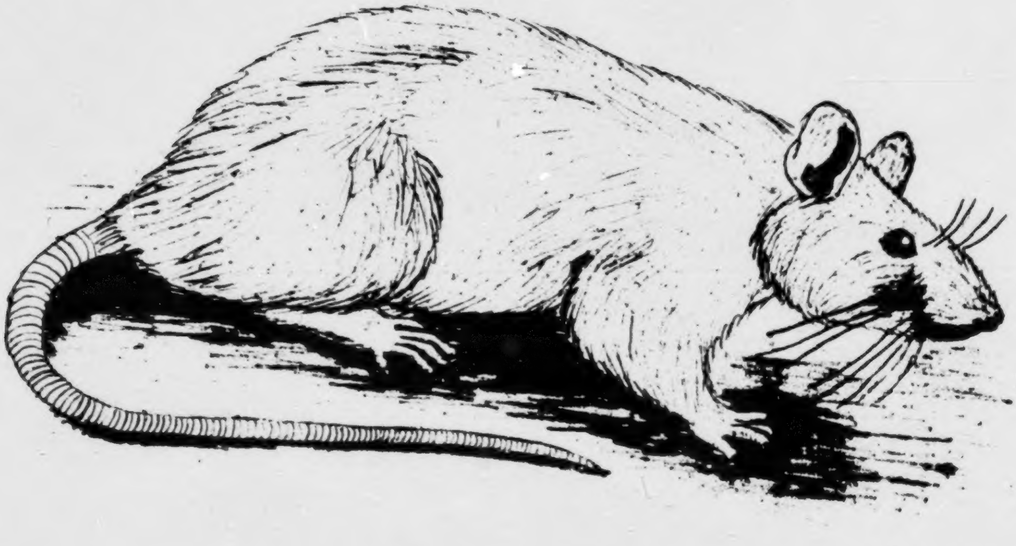


FIGURE B - 20

FIGURE B - 19 WHITETAIL DEER

Description - Height 3-3½ feet, Weight - males are 75 to 400 pounds, females are 50 to 200 pounds, short white tail and fur is reddish in summer and blue-gray in winter. Record antler spread is 33½ inches.

Similar Species - Mule Deer, Elk, Woodland Caribou, Moose.

Habitat - Forests, swamps, and open brushy areas nearby.

Feeding Habits - A browser, eats twigs, shrubs, fungi, acorns, and grass and herbs in season.

Economic Status - An important big game mammal (most important in our area) can do considerable damage to young orchards and vegetable crops.

FIGURE B - 20 NORWAY RAT

Description - Head and body 7 to 10 inches, tail 5 to 8 inches, and weight 7 to 10 ounces. Grayish-brown in color with a rather long scaly tail. Belly is grayish not white.

Similar Species - Woodrats, Black Rat, Rice Rat.

Habitat - Warehouses, farm buildings, wherever food is stored.

Feeding Habits - Feeds on anything edible.

Economic Status - Destroys stored foods and damages buildings. They also carry diseases communicable to man.

REPTILE FLASH CARDS AND INFORMATION

KEY

REPTILES FLASH CARDS

FIGURE G - 01	American Chameleon (Anole)
FIGURE G - 02	Alligator
FIGURE G - 03	Coral Snake
FIGURE G - 04	Cane-brake Rattlesnake
FIGURE G - 05	Five-lined Skink
FIGURE G - 06	Common Snapping Turtle
FIGURE G - 07	Painted Turtle
FIGURE G - 08	Common Musk Turtle
FIGURE G - 09	Pigmy Rattlesnake
FIGURE G - 10	Hog-Nosed Snake
FIGURE G - 11	Cottonmouth
FIGURE G - 12	Copperhead
FIGURE G - 13	Western Ribbon Snake
FIGURE G - 14	Southern Soft-shelled Turtle
FIGURE G - 15	Ground Skink
FIGURE G - 16	Speckled King Snake
FIGURE G - 17	Louisiana Milk Snake
FIGURE G - 18	Alligator Snapping Turtle
FIGURE G - 19	Diamond-back Watersnake
FIGURE G - 20	Blue Racer

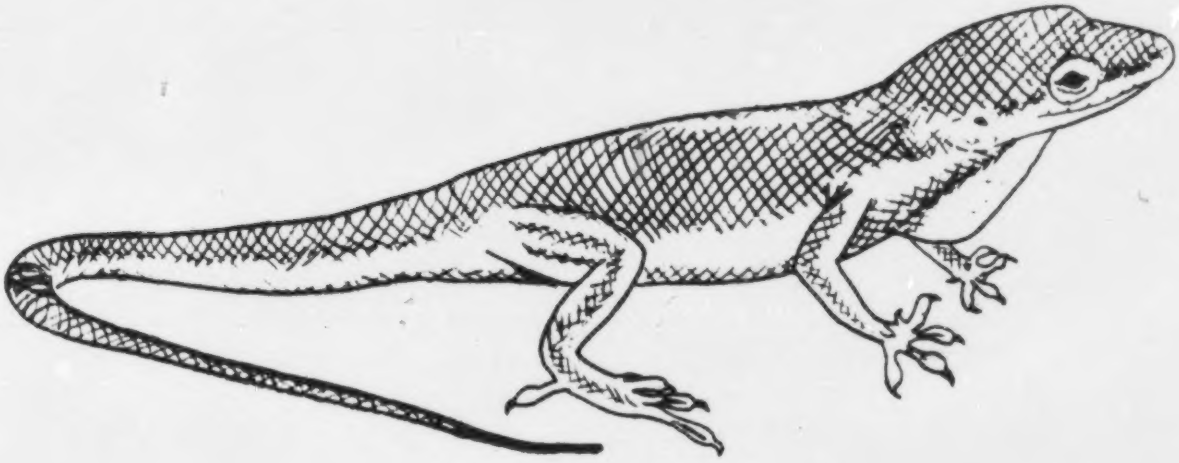


FIGURE G - 01

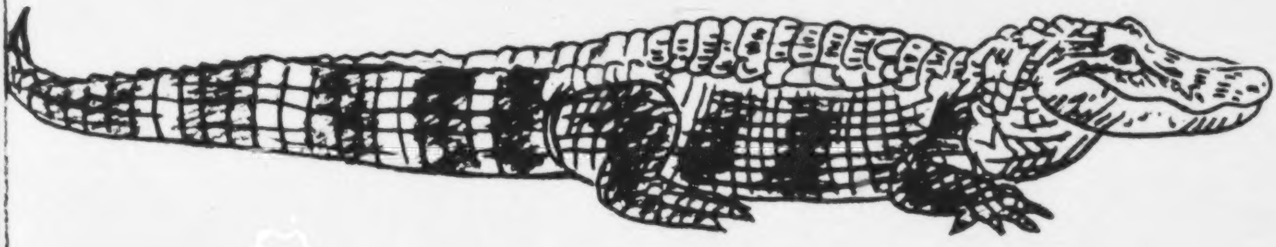


FIGURE G - 02

FLASH CARD INFORMATION

FIGURE G - 01 AMERICAN CHAMELEON (ANOLE)

Description - It resembles a young alligator in miniature. The head is proportionately large and distinct from the neck, but the tail is long, round and slender. Body covered by minute scales. The skin of the body is rather loose and hangs in a fold at the throat. Color varies from shades of brown into emerald green.

Similar Species - None.

Habitat - Woodlands near homes.

Feeding Habits - Mealworms and flies are its favorite foods; it will also eat roaches.

Economic Status - Eats flies.

FIGURE G - 02 ALLIGATOR

Description - The head is broad and bluntly rounded at the snout. Its tail is not vertically flattened to such an extent as that of other species. Color - in young - black or very dark brown with yellow crossbands; adults - uniformly black or dull gray.

Similar Species - American crocodile.

Habitat - Rivers, swamps and marshes of the low coastal region of the Gulf of Mexico.

Feeding Habits - Feeds on fish, mammals, and birds.

Economic Status - Once hunted for its valuable hide it is now a protected species. Fur trappers do complain, however, about the amount of fur-bearing animals they eat.

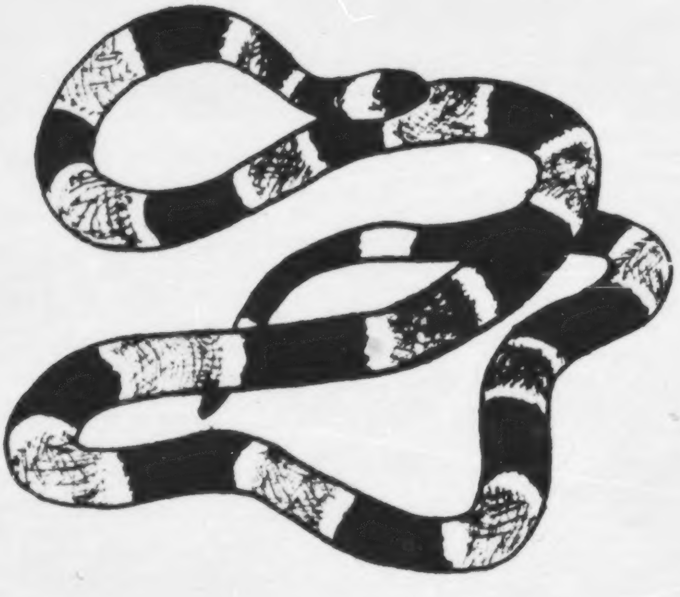


FIGURE G - 03

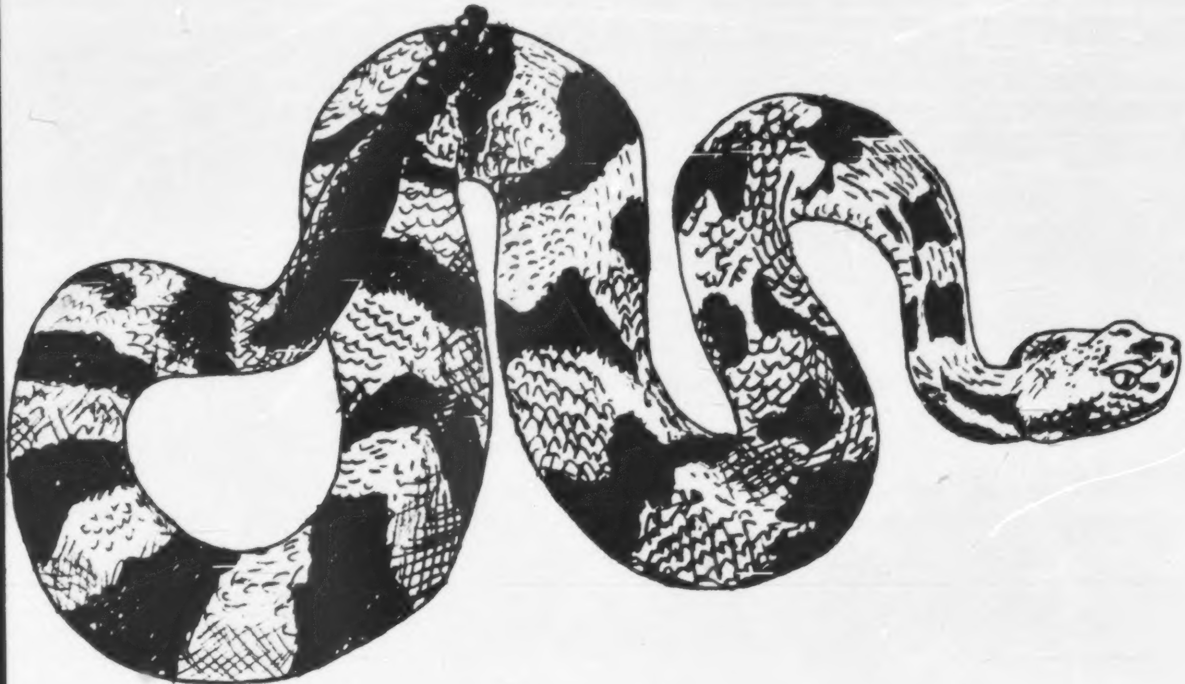


FIGURE G - 04

FIGURE G - 03 COMMON CORAL SNAKE

Description - The head is flat, very blunt, and not distinct from the neck, The color pattern consists of broad rings of deep scarlet and blue-black, and a wide band of yellow crosses the middle of the head; behind this is the first black ring of the body pattern.

Similar Species - Barbour's Coral Snake and Sonora Coral Snake.

Habitat - Piney woods.

Feeding Habits - Feed on other snakes and lizards.

Economic Status - Controls snake populations

Note: There is a saying concerning this snake -
"Red on yellow kills a fellow,
Red on Black, Happy Jack."

FIGURE G - 04 CANE-BRAKE RATTLESNAKE

Description - Recognized by its gray or pinkish-gray body hue, sooty black bands inclined to assume chevron shaped formation, the points directed backward, and rusty red or yellow band on the back.

Similar Species - Other Rattle Snakes.

Habitat - Swampy areas, regions where cane is grown and heavy timber.

Feeding Habits - Eats small mammals.

Economic Status - Controls small mammals.

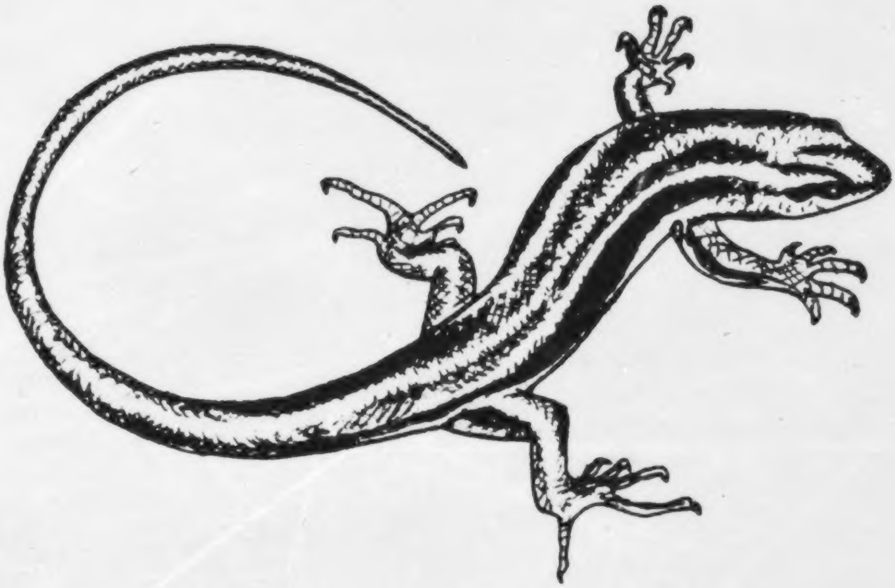


FIGURE G - 05

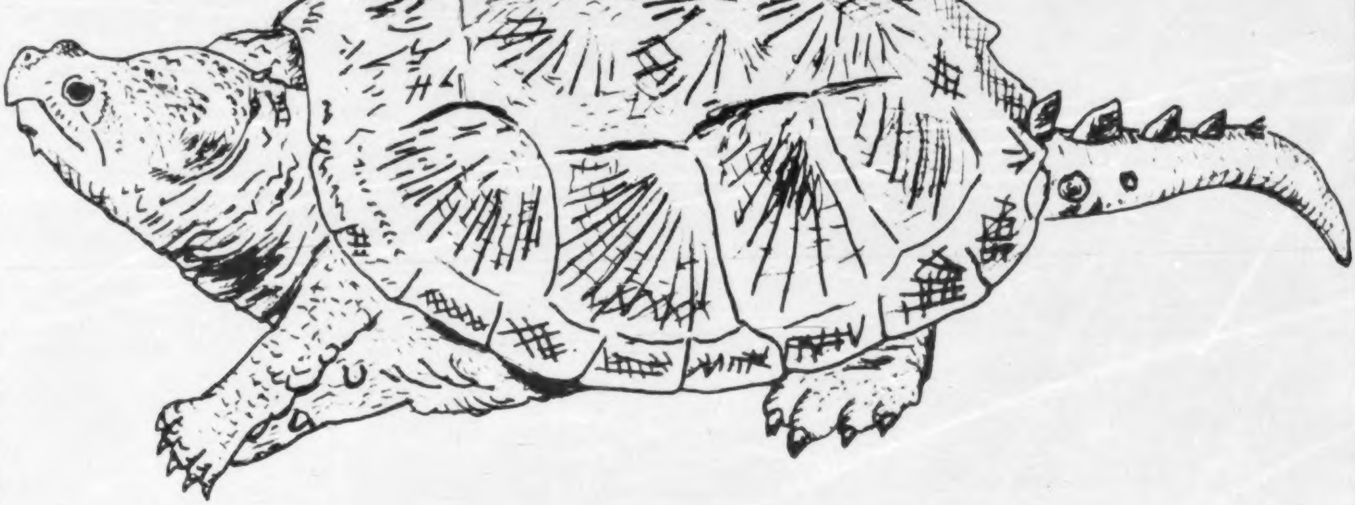


FIGURE G - 06

FIGURE G - 05 FIVE-LINED SKINK

Description - Five pale lines on a dark ground color. Attains a length of 10 inches. Twenty-eight to thirty-four rows of scales round the body, the body is moderately stout. Young are often called Blue-tailed Lizards.

Similar Species - Other Skinks or Smooth-scaled Lizards.

Habitat - Wooded areas with rotten logs.

Feeding Habits - Feeds on insects.

Economic Status - Controls insects.

FIGURE G - 06 COMMON SNAPPING TURTLE

Description - A huge, powerful head. Shell, dull olive or dark brown. Belly, dull yellow. The upper portion of the head, limbs and tail is dark; beneath, they are yellowish.

Similar Species - Other Snapping Turtles.

Habitat - Rivers, lakes, bayous and streams.

Feeding Habits - Eats fish.

Economic Status - Occasionally eats game fish. Meat sold at markets.

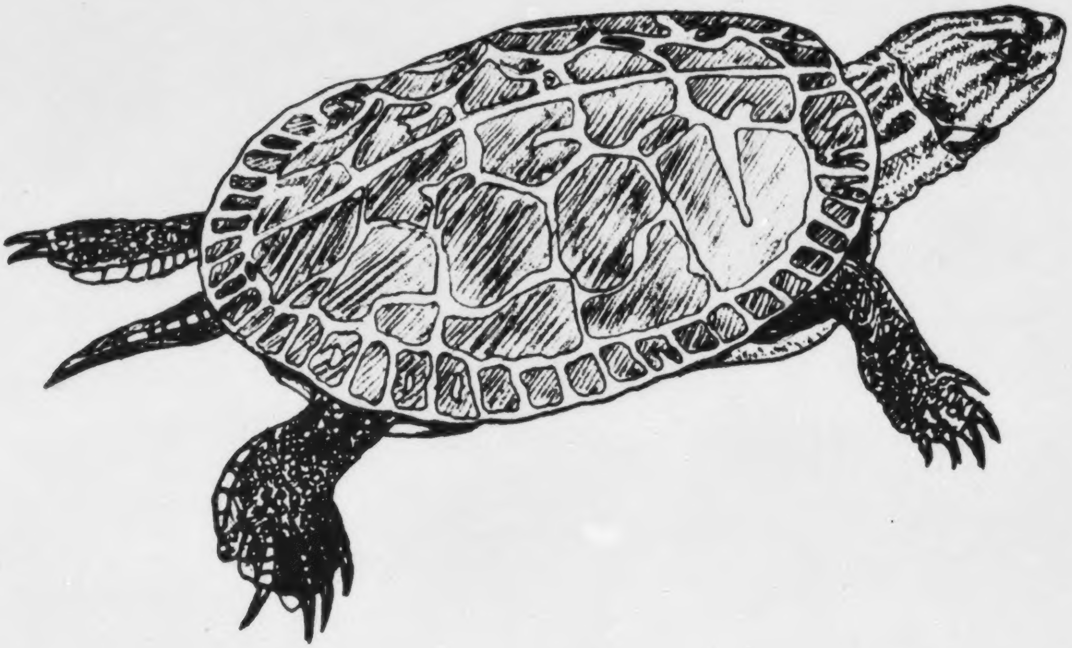


FIGURE G - 07

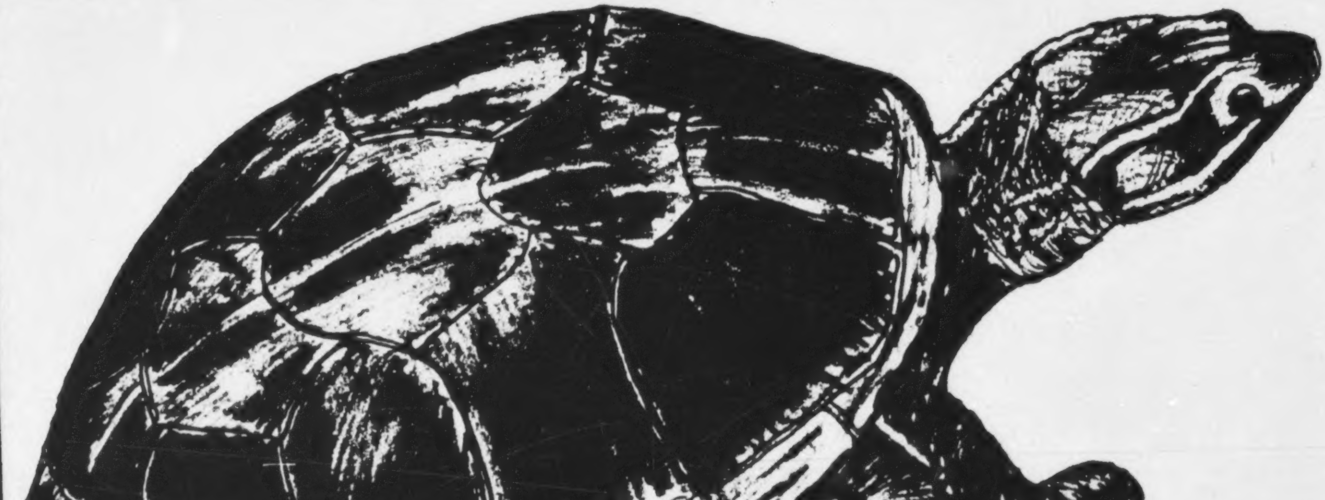


FIGURE G - 08

FIGURE G - 07 PAINTED TURTLE

Description - Shell-dark olive, brown or black, the shields (edge plates) widely margined with greenish yellow, bordered with blood-red. Belly immaculate yellow.

Similar Species - Other Painted Terrapin and Pond Turtles.

Habitat - Ponds, lakes, rivers and bayous.

Feeding Habits - Eats fish and small animals (dead or alive).

Economic Status - Meat sold at markets.

FIGURE G - 08 COMMON MUSK TURTLE

Description - The upper shell is rather narrowly oval and arched to a considerable degree. The head is proportionately large. The feet are broadly webbed. Color - dull, lusterless brown and usually coated with moss. The belly is dark yellow or brown. On each side of the head are two bright yellow stripes one above and one below the eye.

Similar Species - Other Musk Turtles.

Habitat - Slow-running streams and muddy rivers.

Feeding Habits - Eats mainly dead fish and other small animals.

Economic Status - Scavenger.

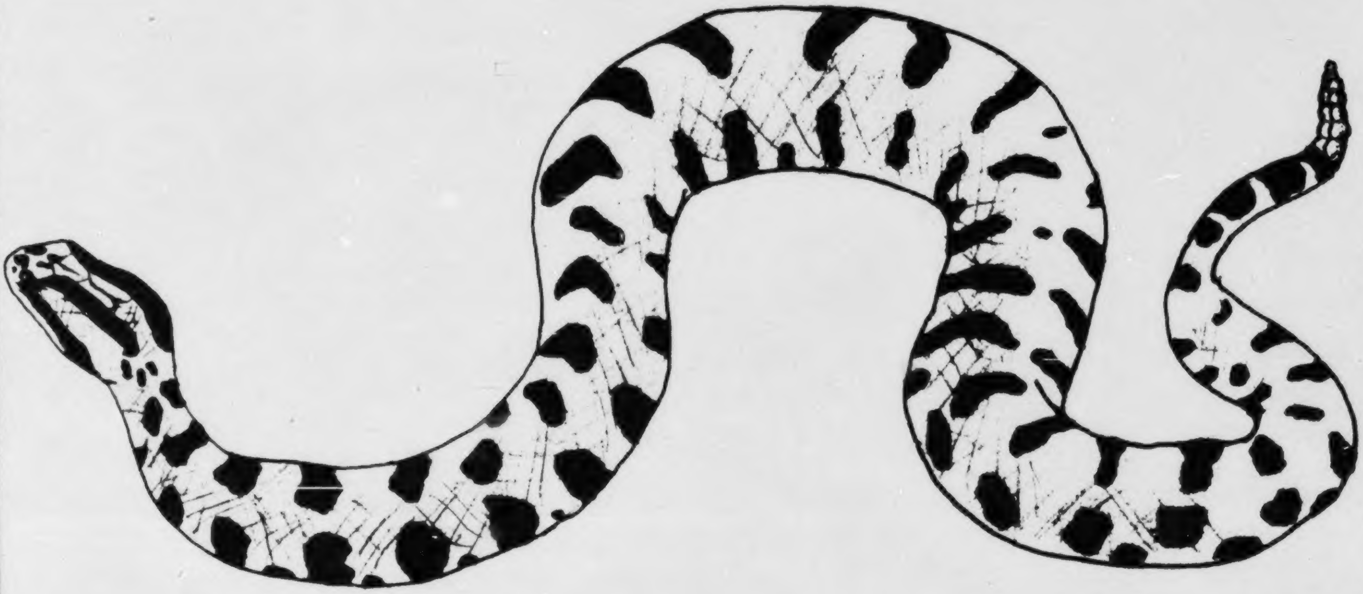


FIGURE G - 09

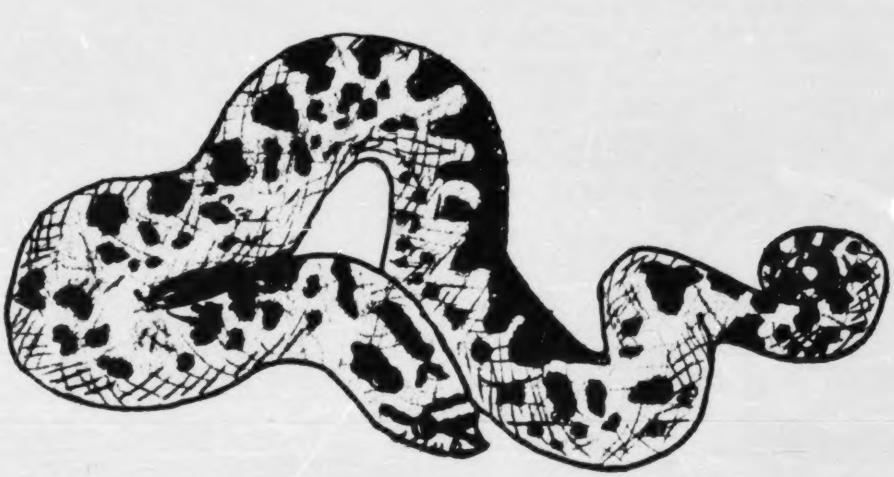


FIGURE G - 10

FI

FIGURE G - 09 PIGMY RATTLESNAKE

Description - Generally dark coloration, observe head pattern, three rows of dark blotches on each side of the main series and the white ventral surface is heavily blotched or distinctly spotted with black or very dark brown.

Similar Species - Other Pigmy Rattlesmakes.

Habitat - Bogs and swamps.

Feeding Habits - Eats mostly mice and frequently eat frogs.

Economic Status - Controls mice.

G - 10 SOUTHERN HOG-NOSED SNAKE

Description - The shovel-like rostral plate on the snout is very sharply upturned. Pale brownish-gray above with a series of large, rather irregular patches of blackish-brown on the back; between these blotches the body color is slightly paler than the sides.

Similar Species - Other Hog-nosed Snakes.

Habitat - Dry sandy areas and dry woods.

Feeding Habits - Eats toads and frogs.

Economic Status - None.

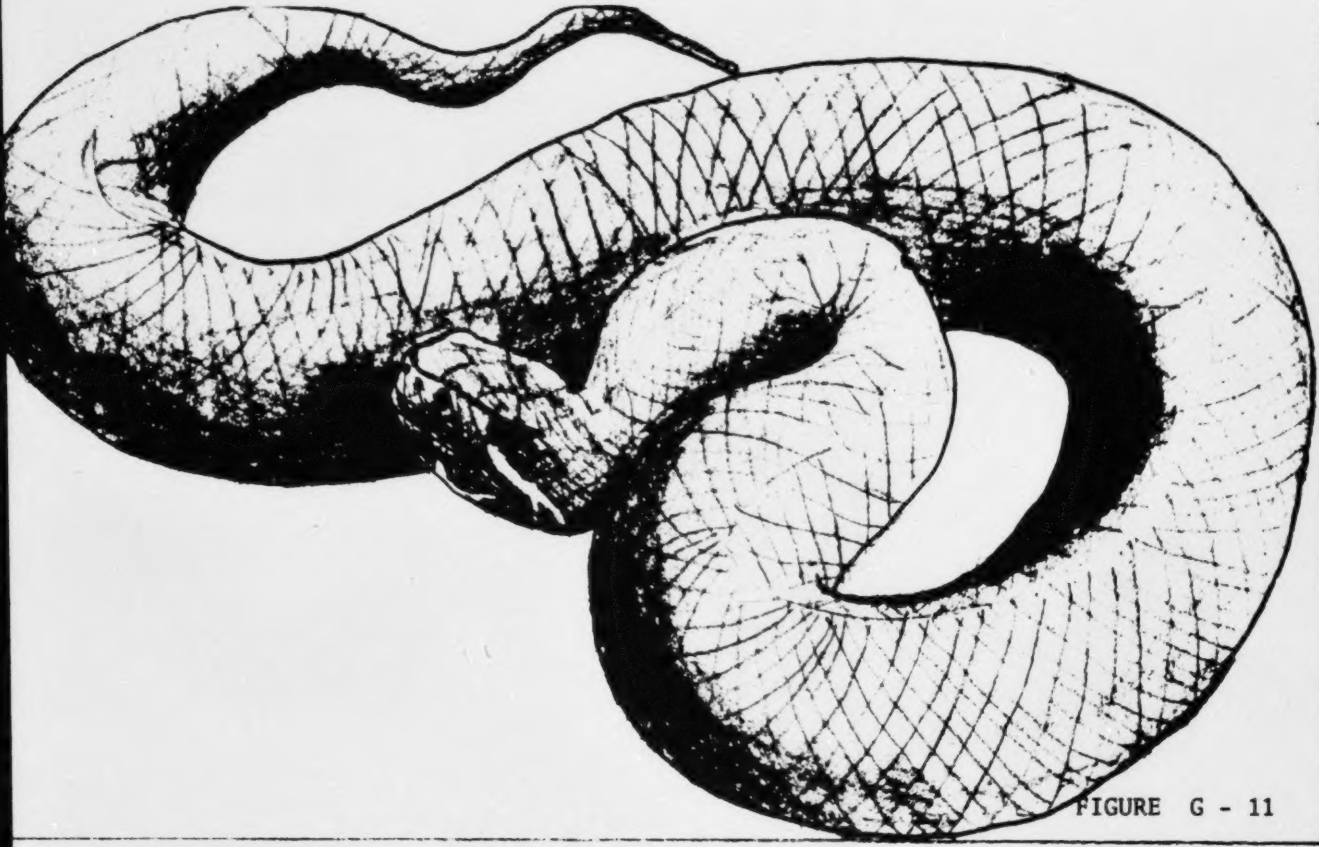


FIGURE G - 11

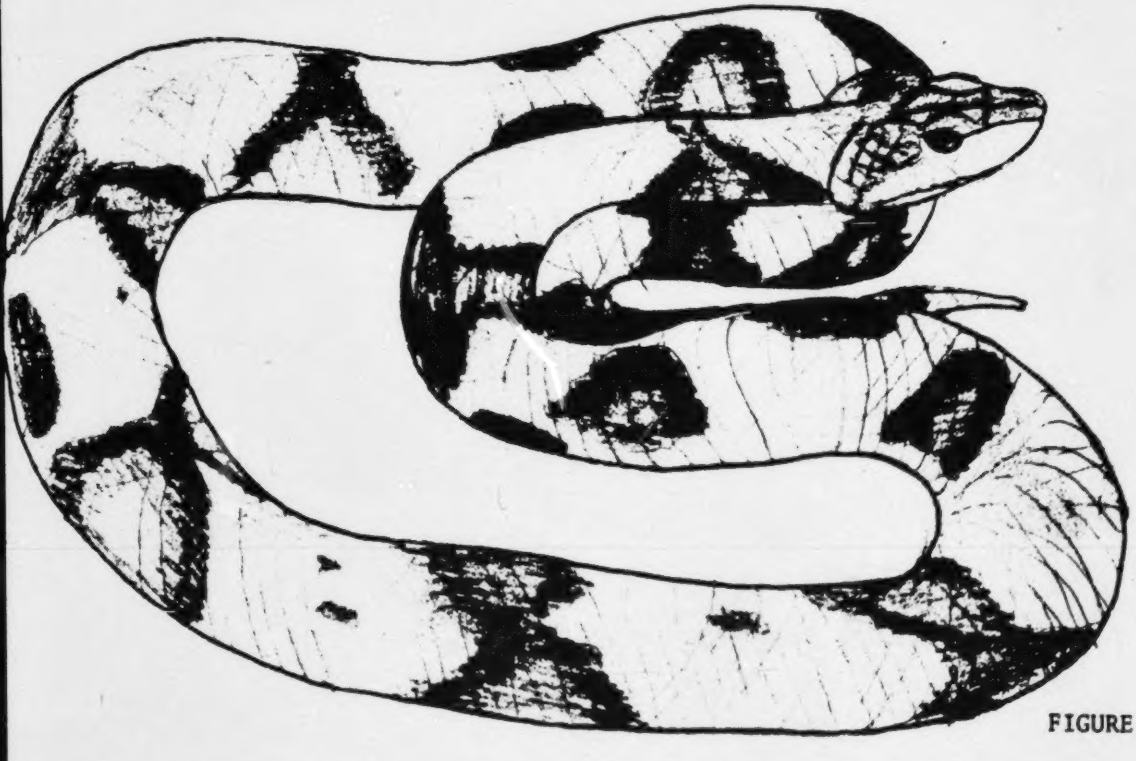


FIGURE G - 12

FIGURE G - 11 COTTONMOUTH (WATER MOCCASIN)

Description - Color pattern consists of 10 to 15 wide dark cross-bands, slightly wider at the base, on an olive or brown ground color. The interior of the mouth is white which the reason for its name.

Similar Species - None.

Habitat - Sluggish streams, bayous and swamps.

Feeding Habits - Feed largely on fish, frogs, and other aquatic animals. They also feed on small mammals, birds, lizards, etc.

Economic Status - None.

FIGURE G - 12 COPPERHEAD

Description - Richly colored, heavy-bodied. Color pattern consists of a series of 15 to 20 chestnut-brown cross-bands, which resemble triangles or inverted Ys. Top of head is coppery-red in color.

Similar Species - None.

Habitat - Rocky or wooded areas.

Feeding Habits - Eat mostly small mammals. However they do eat other vertebrates and insects.

Economic Status - Control mammal populations.

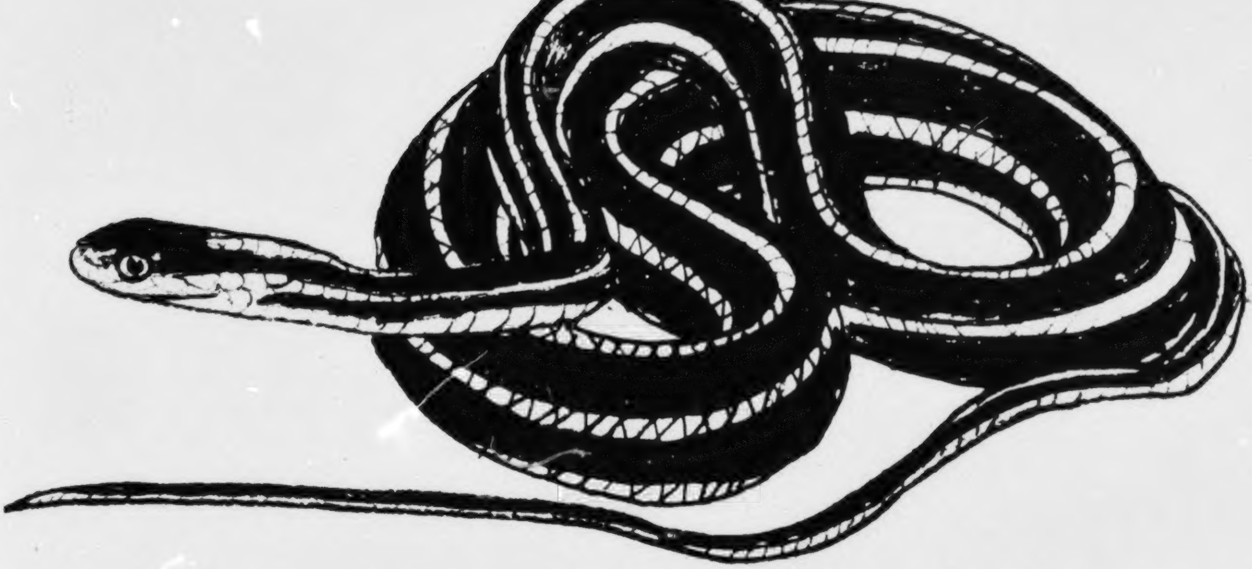


FIGURE G - 13

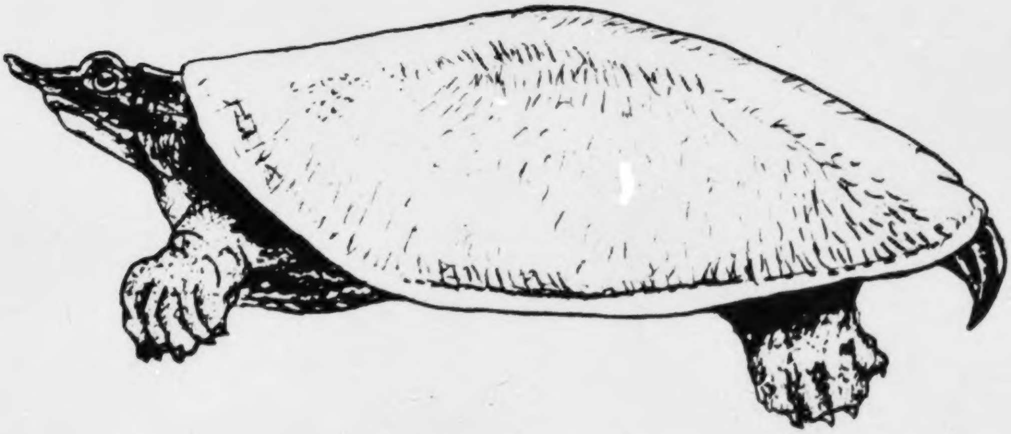


FIGURE G - 14

FIGURE G - 13 WESTERN RIBBON SNAKE

Description - R slender snake with three light stripes on a ground color of olive, brown or black. Middle strips is usually yellow. Belly usually yellowish-white or greenish-white.

Similar Species - Eastern and Southern Ribbon Snakes.

Habitat - Bogs, small lakes or ponds, swampy regions, and banks of rivers and creeks.

Feeding Habits - Eat Salamanders and frogs, and insects.

Economic Status - Controls Salamander and frog populations.

FIGURE G - 14 SOUTHERN SOFT-SHELLED TURTLE

Description - Shell is soft and when turtle is out of water the edges droop about it. Color - dull brown shell, head is brown, with indistinct pale bands, and belly is white. Has a very long neck and somewhat pointed snout.

Similar Species - Spiny, Brown, and Emory's Soft-shelled Turtles.

Habitat - Rivers, ponds and lakes with a soft muddy bottom.

Feeding Habits - Feed heavily on crawfish.

Economic Status - Meat is edible and sold at markets. Also are considered pests in crawfish ponds.

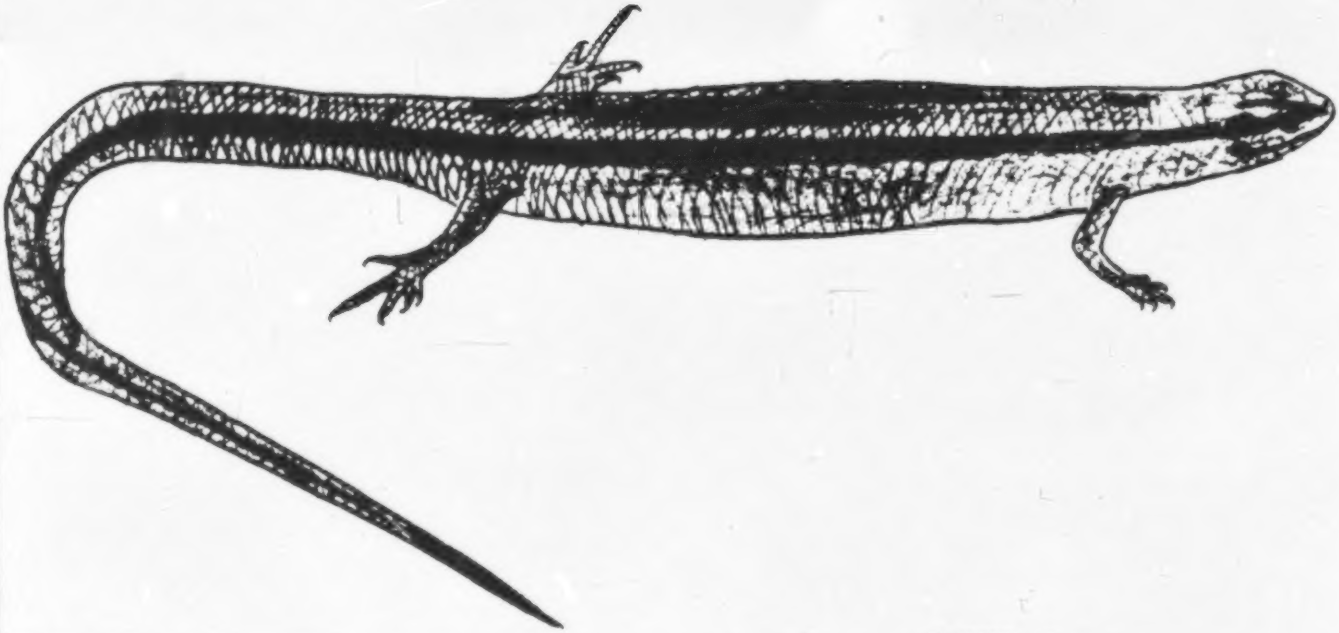


FIGURE G - 15

FIGURE G - 16

FIGURE G - 15 GROUND SKINK (GROUND LIZARD)

Description - A small elongated cylindrical body with small limbs. Coloration - back and upper portions of tail and head bronze, sometimes olive, with small dots - on the body - in lines. On each side of the bronze area is a dark band. Belly is yellowish.

Similar Species - Other Skinks and Smooth-scaled Lizards.

Habitat - Under fallen leaves, slabs of bark, or burrows under fallen tree trunks.

Feeding Habits - Eat ants and their larvae and the grubs of the smaller wood-boring beetles.

Economic Status - Help to control insects.

FIGURE G - 16 SPECKLED KING SNAKE

Description - A large, shiny snake with general "salt and pepper" appearance. Ground color is blue-black, with a white or yellowish spot near the center of each scale. Belly yellowish or white, checked with large black blotches.

Similar Species - Other King Snakes.

Habitat - Usually found in dry patches of timber. Often found close to streams and ponds.

Feeding Habits - Eat other snakes especially poisonous snakes, and small mammals.

Economic Status - Eat poisonous snakes. Helps to control mammals.

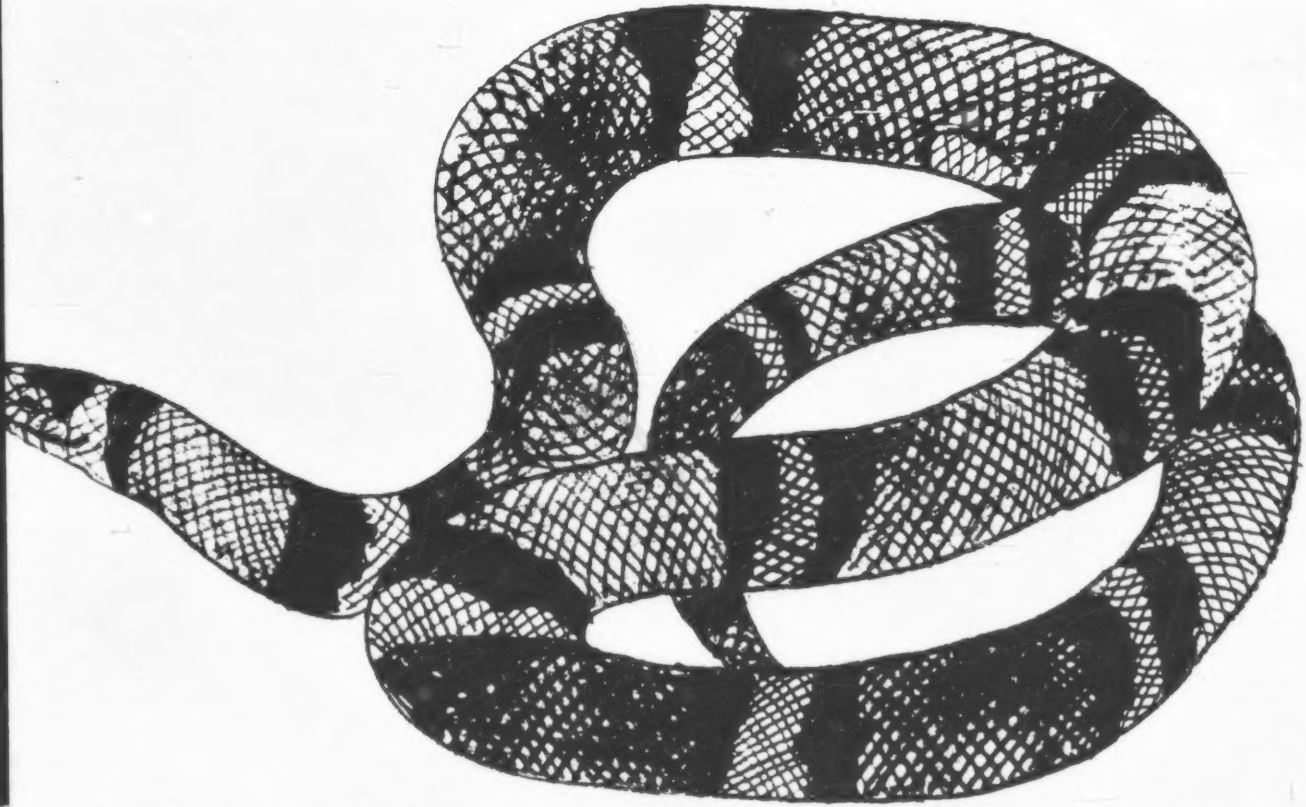


FIGURE G - 17

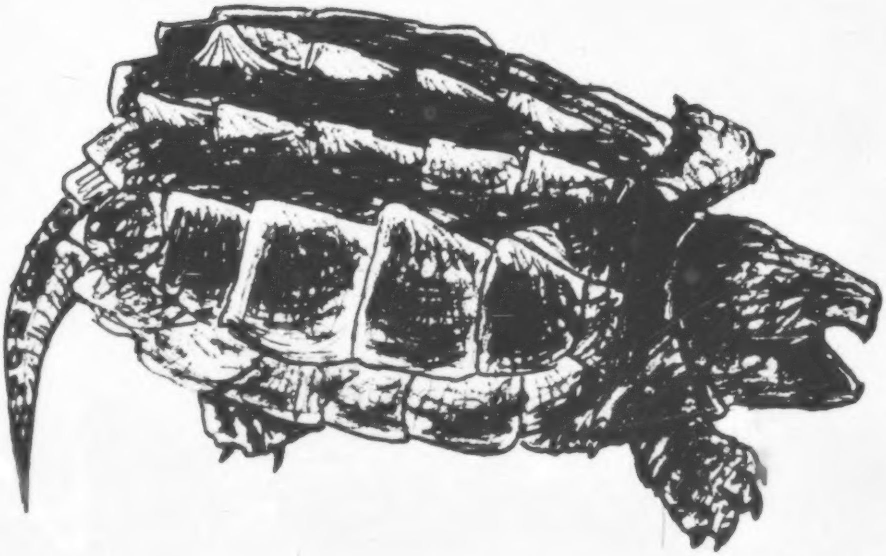


FIGURE G - 18

FIGURE G - 17 LOUISIANA MILK SNAKE

Description - A small snake, rarely reaching a length of two feet. It is marked with a brilliant pattern of rings arranged in the following order: yellow, black, red, black, yellow, black, red, black, etc. This snake is often confused with the poisonous Coral Snacks.

Similar Species - Other Milk Snakes. Coral Snake.

Habitat - Pastures. Around stables and dairies. Hides under stones and debris.

Feeding Habits - Eats mice and rats. Also eats other snakes and lizards.

Economic Status - Helps to control mice.

FIGURE G - 18 ALLIGATOR SNAPPING TURTLE

Description - Has high keels on the shell which is pale brown or yellowish. The head and limbs are the same color. The belly is a paler hue, there are large rounded scales under the tail.

Similar Species - Other Snapping Turtles.

Habitat - Rivers emptying into the Gulf of Mexico.

Feeding Habits - Feed mostly on fish however they also eat water fowl.

Economic Status - Meat is sold at markets. Sometimes become a pest when they feed too heavily on game fish.

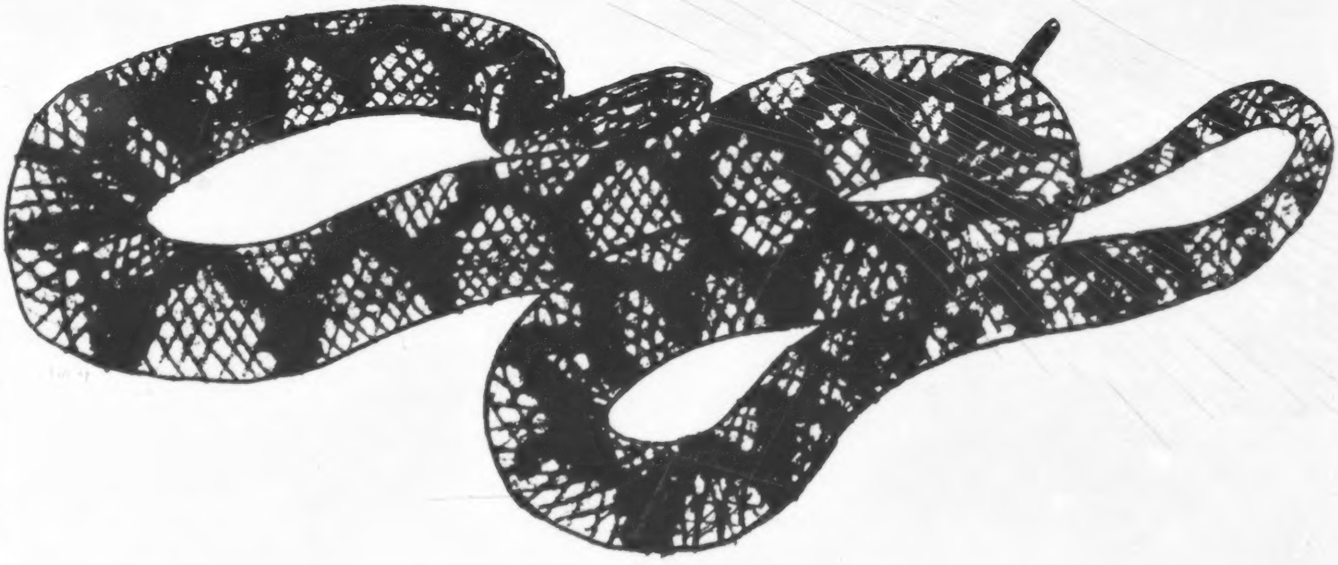


FIGURE G - 19

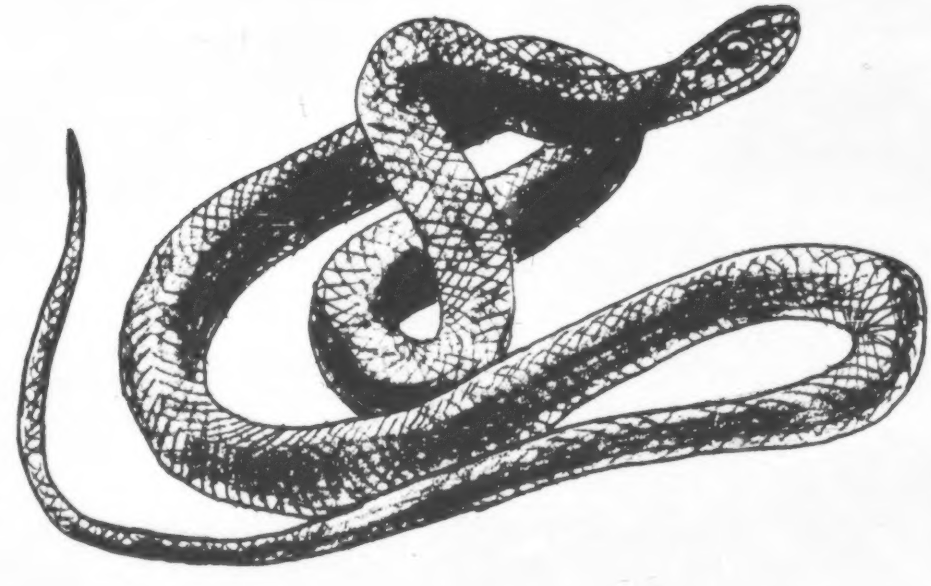


FIGURE G - 20

FIGURE G - 19 DIAMOND-BACK WATERSNAKE

Description - A large, very heavy- bodied snake, brown or olive in color with a chain of diamond-shaped markings along the back. Belly yellow, marked with semilunar brown spots, especially toward the tail.

Similar Species - Other Water Snakes.

Habitat - Lakes, streams, bayous and rivers.

Feeding Habits - Feed on fish, frogs and turtles.

Economic Status - Help thin out fish populations.

FIGURE G - 20 BLUE RACER

Description - A large, bluish or greenish-blue snake, ranging to dark gray or olive-gray. Belly very light blue or greenish-gray or yellow, somewhat lighter on the throat and chin.

Similar Species - Other Whipsnakes and Racers.

Habitat - Thinly wooded areas.

Feeding Habits - Feed especially on mice and other small mammals and insects.

Economic Status - Eat rodents and insects.

Note: They do not "charm their prey and "chase" people.

GLOSSARY

AIR: Clear, colorless substance that people breathe.

AIRPLANE: A machine that flies and carries people.

AIR POLLUTION: Air that is unclean.

AMPHIBIANS: Animals that have moist skin. For example, frogs, toads, salamanders, etc.

ANIMALS: Living things that need air, water and food in which to live. The six major groups of animals are mammals, birds, fish, reptiles, amphibians and insects.

AQUARIUM: A home for fish.

BAYOU: Body of water in which some animals and plants live.

BEAVER: A small fur-bearing animal that lives both in water and on land.

BARE SKIN: Without any type of body covering.

BIG: Something that is large.

BIRDS: A group of animals that have feathers and wings.

BLOWING: Forcing air out of the mouth.

BREATHE: Taking ain and letting out air from the lungs.

CLAM: An edible shellfish with a hinged double shell.

CLEAN WATER: Water that's not dirty.

CLOUDS: Puffy grayish-white formations made up of water.

COMMUNITY: All the persons who live in one place.

COVERING: Anything that wrap something.

DANGEROUS: Something that can hurt you.

DIFFERENT: Not alike, not the same.

DRINKING: Taking in and swallowing a liquid.

EARS: That part of animals through which they hear.

EARTH: A place where people, plants and animals are able to live.

EATING: Taking in food.

EROSION: The wearing away of the land surface by wind or water.

ESCAPE: To get away.

EXPLORE: To search or examine thoroughly.

FAN: A machine that moves air.

FANNING: To move the air.

FEATHERS: The outer covering of a bird.

FINS: The parts of a fish that help them swim.

FISH: A group of animals that have gills and fins that live in water.

FLOWER: Part of a plant that blooms where seeds are made.

FOOD: Something that is needed to keep the body alive and make it grow.

FOOD CHAIN: A group of living things in which one living thing feeds on another and in turn is eaten by another living thing.

FUR: The outer covering of a mammal.

GILLS: Part of a fish used in breathing under water.

GROWING: Increasing in size.

HAIR: A special type of outer covering of a mammal.

HARMFUL: Something that can hurt you.

HEARING: To hear sounds through the ears.

IMITATE: To copy.

INDUSTRIAL WASTE: Waste caused by industries.

INSECTS: Small animals that have six legs and three body parts.

KITE: A paper toy that is moved by the wind.

LITTLE: Small in size.

LIVING THINGS: All things which need food, water and air and are capable of making more like themselves. All plants and animals belong to this group.

MAMMALS: Animals that have fur or hair.

MINERAL: Any substance not animal or vegetable in origin.

MOIST SKIN: Skin that feels damp or wet.

MOTOR VEHICLE: Machines that have motors and move.

MOVING: Getting from place to place.

NON-LIVING THINGS: All things that do not need water air or food and do not make more like themselves.

NOISE: Loud sounds.

PARACHUTE: Cloth that is held open by the wind.

PETS: Tame animals that people own.

PLANTS: Any of a group of living organisms which typically does not exhibit voluntary motion or possess sensory or nervous organs; a vegetable as distinguished from an animal.

POND: Small body of water where plants and animals live.

PRODUCE: That which is produced, brought forth, or yielded.

PUDDLE: A small collection of water on the ground usually after a heavy rain.

PUSHING: To move something by using force.

RACCOON: A grayish-brown animal with a bushy ringed tail.

RAIN: Drops of water that fall from clouds.

REPTILES: Animals that have scales and claws. (turtles, snakes, lizards, etc.)

SAME: Unchanged in nature or behavior; equally desirable.

SCALES: Hard outer covering of reptiles.

SCALLOP: A salt-water shellfish with two fan-shaped, usually ribbed, and the shells are hinged together.

SHAPE: The form or figure of anything.

SHELTER: Anything that protects, covers, or shields.

SIZE: A measure showing how larte something is.

SMOKE: Cloud-like material that comes from a fire.

SNAIL: A small animal with a spiral shell which live in water or on land.

SOFT: Not hard; fluffy or light.

SOOT: Black pieces of ash.

SOIL: The upper layer of earth which may be dug, plowed; the loose surface material of the earth in which plants grow.

SOUND: Sensation due to stinulation of the auditory nerves and auditor centers of the brain.

STREAM: Small flowing body of water.

SUNLIGHT: Light from the sun.

TRASH: Unwanted garbage.

TURTLES: Animals that have a hard shell and is a reptile.

UNCLEAN WATER: Dirty water; water that contains trash.

UNPLEASANT: Not likable; disagreeable.

VASELINE: A jelly-like substance.

WATER: Clear liquid that animals and plants need to live.

WAX PAPER: Paper that has a coating wax.

WILDLIFE: Animals or plants not raised by man.

WIND: Moving air.